राष्ट्रीय ग्रामीण विकास एवं
पंचायती राज संस्थान
NATIONAL INSTITUTE OF RURAL
DEVELOPMENT AND PANCHAYATI RAJ
Ministry of Rural Development, Government of India

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TRAINING & CAPACITY BUILDING | RESEARCH & CONSULTANCY | POLICY FORMULATION & ADVOCACY | TECHNOLOGY TRANSFER | ACADEMIC PROGRAMMES | INNOVATIVE SKILLING & LIVELIHOODS

Mobile-based field data collection in rural development

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Mobile-based field data collection in rural development

Open source technologies in every sector are on the rise, and many applications that can be used in research data collection and location-based surveys are available. In this regard, being informed about the application potential of free and open source mobile-based tools/applications for field data collection is essential. The tools being discussed can be applied in any sector, including rural development.

CGARD, NIRDPR is a centre dedicated for Geographic Information Systems (GIS) applications, training and capacity building in rural development sector and CICT, NIRDPR is a centre dedicated for applications, training and capacity building in IT for rural development. Both the centres are involved in application management, training and capacity building on various free and open source mobile-based data collection tools like Open Data Kit (ODK), OSMAND, etc.

Mobile-based technologies for field data collection can be broadly divided in two segments, based on limitations of applications of tools.

a) Tools which are able to give locations of various sites in the form of point and lines with little information (attributes) in individual mobiles.

b) Tools which are able to give locations (mostly points), photo, video, audio and required information in pre-designed forms. Same form/s can be used in multiple mobiles at multiple locations for data collection and sending the data to the server for aggregation.

Availability of Open Source tools for net independent, multilingual, mobile-based data collection, with location and media is a boon. All development functionaries, academicians and researchers should try to harness this opportunity in the best possible way

Both segments are represented in Figure 1(on page 4).

CGARD is already involved in training and capacity building of rural development functionaries on first kind of tools mentioned in Figure 1. Tools like OSMAND are given priority in training for having standard open source/free licence, capability of having offline Open Street Map (OSM) maps for offline visualisation and navigation along with other online maps like Microsoft Bing satellite maps.

Seeing the research and project requirements of NIRDPR and for minimising errors and increasing the pace of studies, it was desired by the Director General, NIRDPR to apply mobile-based data collection tools in the Institute. As ODK is a widely-used, well-tested and established free and open source tool suite, it was suggested that the team at NIRDPR uses it, which was further accepted by the NIRDPR administration. With the support of OSGeo Foundation and key experts from Free and Open Source Software for GIS (FOSS4G), a three-day workshop on Open Data Kit (ODK) was organised during 2-4

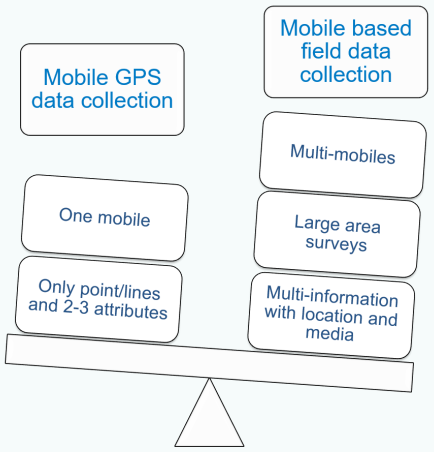


Figure 1: Mobile-based technologies for field data collection

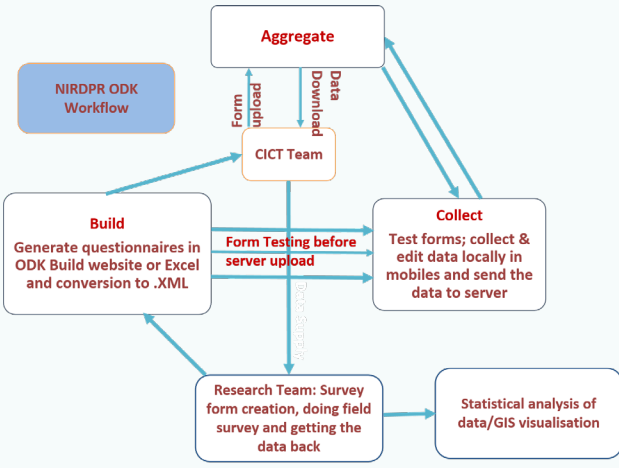


Figure 2: ODK workflow in NIRDPR

November, 2017 in NIRDPR, Hyderabad. On the third day of workshop, ODK local server was configured in NIRDPR on a few computers. The server was tested by staff, CICT and faculty members of NIRDPR. Since then, Open Data Kit (ODK) is available for use in NIRDPR.

ODK is being used in research studies and projects of NIRDPR in key thematic areas under various relevant flagship schemes of Ministry of Rural Development and Ministry of Panchayati Raj, Government of India.

ODK data and process management in NIRDPR

Under the guidance of CICT team, research team members convert the hard copy survey schedules/forms of research study into ODK compatible forms in .XML formats. This is being done in ODK Build site (http://build.opendatakit.org) with individual credentials.

Alternatively, for complex forms, 'XLS form' is used. XLS Form is a form standard created to help simplify the authoring of forms in Excel (http://xlsform.org/en/).

Once the form is generated and converted to .XML using the above tools, these .XML files are copied from PC and pasted in the 'Forms' folder inside 'ODK' folder available in internal memory of mobile (if ODK Collect app is installed in mobile). The form is then visible in 'ODK Collect' mobile app. Forms are tested in mobiles taking dummy data or by doing pilot surveys. If any correction is found necessary after testing, the original blank form and data collected are deleted using 'Delete Saved Form' option in ODK Collect app and the revised form is taken in the mobile and tested in the same manner. After sufficient iterations and satisfaction of the research team, the final .XML form is sent to CICT team through email for uploading on aggregate server for further download in mobiles for actual use.

From ODK server, data collectors or field investigators download the forms of relevant studies using the data collector's credentials and 'Get Blank Form' function in app. After data collection, they can send data from mobiles to Aggregate. During the survey, internet connectivity or mobile network is not required and to save the charge in mobile, it can be put on Aeroplane mode. During sending of data to server computer, internet connectivity is required.

The data of research studies or projects are taken from CICT in consolidated manner on a timely basis by research coordinator. This data is downloaded by CICT team using 'ODK Briefcase' utility in the form of .CSV file containing responses and 'Media' folder which contains photographs/media.

This data are used for statistical analysis with the help of different statistical software by research teams. Same data can be used in GIS environment, also using Open Source QGIS software or any other commercial GIS software, if one of the questions is included in the survey form and collected during survey as 'Location'. Figure 2 depicts the ODK workflow in NIRDPR.

Language Localisation in ODK

Open Source gives the freedom to the users to be involved in all spheres of development cycle of a project. Getting involved in language localisation is also an opportunity to the users. ODK interface has been translated into Hindi at NIRDPR using official online Transifex (https://www.transifex.com/) language localisation platform.

For translation of ODK interface, survey forms and entering the survey responses in mobiles in different languages and transliteration, utilities like 'Google Translate' and 'Google Input Tools' are used.

Screenshot of ODK collect App

Challenges

It is required of the research team to have more command over workflow. Presently, due to limitations of current version of ODK, data viewer and above rights are not provided to research teams and they can only collect and send the data to server, as depicted in Figure 2.

It is expected that by the use of newer version of ODK tool suit in future, above limitations may be minimised. Engagement of dedicated and appropriate staff having database and programming knowledge may be helpful for customising the tool as per need. The same expert with proper knowledge of Microsoft Excel and data management may give extra support to research staff by preparation of forms and training the research team and investigators on the use of tool.

Conclusion

In the resource constraint environment of developing countries, collection and management of the data is a crucial aspect. In this scenario, having easy, readily customisable, scalable, free and open source tools are a boon for rural development sector and developing countries. Organisations like NIRDPR, which play a pivotal and lead role in development sector, have been using such technology and are also disseminating such knowledge to relevant organisations in India and developing countries.

Shri H. K. Solanki
Assistant Professor
CGARD, NIRDPR
Coverpage design: **Shri V. G. Bhat**

PMAY-G: A success story from Kishanganj, Bihar


Beneficiaries in front of a newly constructed house under PMAY-G in Kishanganj, Bihar

A robust house is exceptionally crucial and acardinal necessity for the fulfilment of one's livelihood. A proper four-walled and roofed house generates a sense of social prestige and economical security for the family in the society. Moreover, this brings about social change in the personality of the owner and helps one to grow up in the social environment. For the fulfilment of one's principle need and growth of the rural precinct, a scheme named 'Pradhan Mantri Awaas Yojana' is pioneered.

Why is the achievement exceptional?

The achievement is exceptional because it is a perfect example of implementation of a holistic model to induce a positive social and behavioural change by creating a mass mobilisation movement. The milestone was achieved by overcoming the geological, meteorological, topographical, socio-economical and lingual challenges.



Newly constructed houses under PMAY-G in Kishanganj, Bihar

Kishanganj district is located at the top east fringe of Bihar with the majority of the population living below the poverty line and sharing an international border with Nepal. This led to a heavy migration of the locals in search of livelihood to delaying the completion of the sanctioned 'Awaas'. Due to the geographical location (sharing border with Nepal and West Bengal), a dialect 'Soorjapuri' is spoken locally creating hindrance in communication and spreading awareness.

The district comes under heavy rainfall zone with vulnerability to flood each year. This inculcated a sense of insecurity in locals as the constructed houses are washed out in floods. The beneficiaries, ready to construct the house preferred tin roofs, instead of RCC roof which withered during cyclones. All of these challenges were tackled by developing a holistic model and reverse engineering the scheme implementation. The implementation team underwent a capacity building training along with an introduction to all the challenges. Constant monitoring and evaluation of the shortcomings provided an input to improvisations. Identification and incentivising the champions to constantly maintain the motivation amongst the beneficiaries and the working team was necessary. A rigorous IPC and IEC campaign to spread awareness on local language along with undying efforts of the entire team lead to this sterling achievement.

Necessity of PMAY-G

A pucca house is a prerequisite requirement for a family to reside and feel safe simultaneously. A roof casted house ensures the safety of a family from natural disaster as well as any social concern. In the rural precinct, economical factors hamper the ability of a family to have a 'pucca awaas'. Due to the rise in the prices of commodities for house construction, it became difficult for a family to complete the house within the incentive fund provided through Indira Awaas Yojana. Keeping the same concept in mind and to achieve the mission of 'House for all by 2022', PMAY-G came into being in the year 2016-17.

Initiatives undertaken to ensure the timely completion of the houses

To ensure the completion of houses within the destined time period, it was necessary for the Awaas functionary to work responsibly and ate the beneficiary to complete the construction of the allocated houses. Provisions were made to incentivise both the beneficiary and awaas functionary for completing the house within the given time frame. The district also initiated the following steps for monitoring of the awaas functionary and motivating the beneficiary for the time bound completion of its Pradhan Mantri Awaas Yojana (Gramin) units:

- A surveillance/random inspection of the presence of awaas worker in their Panchayat through district control room
- Daily review of the activities undertaken by the awaas functionary
- Motivation for the beneficiary through door-to-door visit/telephone and also providing solution to any difficulties faced by them in the completion of awaas


Newly constructed houses under PMAY-G in Kishanganj, Bihar

- Rigorous monitoring of the awaas worker through WhatsApp group and random inspection of their location/ work undertaken
- A weekly review meeting on the progress of PMAY-G with BDOs and awaas workers
- Strict vigilantism on middlemen. Meeting with beneficiaries at block/panchayat and ward level
- Provisions to give incentive to awaas functionaries were made
- Provisions to give incentive to beneficiaries who completed their houses within the scheduled time frame were made
- Felicitation of beneficiaries and awaas functionaries during important events like Sthapna Diwas, Independence Day, Republic Day, etc.
- Awareness, campaign and pamphlet in local languages were distributed among the beneficiaries ensuring the enrichment of their knowledge
- Inclusion of other block and GP level functionaries such as PRI functionaries, PDS dealer, revenue officers were ensured to monitor each beneficiary for completing the house.
- Monitoring of Awaas app, Nirikshan app was ensured
- Various IT tools and techniques were used to monitor the movement of the awaas functionaries in the field

A strict direction was given to all the awaas sahayaks to immediately inform the beneficiary of the allocated amount into their account to tackle any trouble from the CSP moderator or any other intermediate person

Triumph...

All the families devoid of a robust house are allocated a pucca awaas under the PMAY-G, which improves the quality of life for the family. This ignites a sense of self-confidence and pride within the family and also improves the education level of the coming generation. This yojana is a significant initiative towards women empowerment. The management information system of the PMAY-G is open to all. One can access any report and progress of any district/ block/Panchayat without any bondage. This develops a more transparent and streamlined system.

Heedlessness of the beneficiary	Issued White and Red notice. Ensured visit of awaas functionaries everyday at their doorstep
Lack of awareness of the beneficiary	Sensitisation workshop for the beneficiaries. Awakening them about disciplinary action against them as per the rule, if they failed to construct houses after receiving government assistance
Non-availability of trained mason	Training camp of required numbers of labours and masons in house construction through Labour Superintendent and RSETTI (Rural Self Employment Training Institutes) was organised. All trained mason were duly registered at labour department after certification so that they can be easily identified and tagged with the respective block as per necessity
Doubt about size of house	The beneficiaries were guided to construct the house within 25 Sq. Mt. area to ensure the timely completion of the awaas
Dispute between family members	The BDO and CO commenced a meaningful resolution of any ongoing domestic dispute by going into the panchayat himself
Lack of construction material	Support to old and disabled beneficiaries. The local brick manufacturers and vendors were asked to arrange the construction material in bulk for facilitation
	Plan for unified availability of construction material
Heavy rainfall and flood-prone area	The beneficiaries were guided to construct the house on a raised plinth to avoid the effect of flood water
Cyclone prone area	To ensure the house remains robust even after cyclones, a solid RCC roof was promoted so that the houses remain unaffected from the cyclonic winds
Seismic zone V	An earthquake resistant design was finalised. A designated team worked throughout to educate the people of an earthquake resistant design. A vigilante team including BDO and CO checked the implementation of the correct construction design.

Issues and action taken in the execution of yojana

Most of the beneficiaries are not financially sound to pay for materials required to construct their house. Local-level public representative, social activist, youth and benificiaries were motivated and mobilised to come forward in their social cause to complete their houses within time frame.

Kishanganj district has a very distinct geological and socio-economical status of all the districts in the State. The district being the exterior most in the State and sharing borders with Nepal and West Bengal creates a number of challenges in implementation of any development scheme. Now, the completion of houses sanctioned under PMAY-G in a time-bound manner was itself a Herculean task. The work needs to be started from the grassroots itself. An unaware beneficiary of the sanctioned amount, augmentation of the house area by the beneficiary causing depletion of the sanctioned amount, unavailability of the bread runner, any family dispute, meteorological conditions, etc., were some of the challenges faced during the implementation of PMAY-G in Kishanganj. The ground work started with daily motivation and rigorous IEC and IPC of the sanctioned beneficiary along by the Awaas functionary and capacity building of masons and labourers to facilitate the construction of *Awaas* in the rural precinct. To monitor the regularity of awaas functionary and progress in the construction of awaas, a daily follow-up was conducted with the beneficiary from the district control room. This gave the actual ground reality which as analysed to plan the implementation of the scheme accordingly. A regular monthly review meeting was conducted with the BDOs and awaas staff which helped in streamlining the progress and also brought out issues faced for the completion and thosewere resolved on utmost priority basis.

A year ago, it seemed a difficult task, but with the team's dedication and continuous monitoring by district cell, the milestone has been achieved. Pucca Awaas is the basic necessity of every person and I feel immensely proud that we could contribute to bring smile on the face of the people.

The formative monitoring lead the district to achieve 96 per cent completion.

Yash Pal Meena (I.A.S.)
Deputy Development
Commissioner, Kishanganj, Bihar

Symposium on Climate Change Mitigation for Asia-Pacific Countries

1st row from left: Mr. Tevita G. Boseiwaqa Taginavulau, Director General, CIRDAP; Smt. Radhika Rastogi, IAS, Deputy Director General, NIRDPR; Smt. Leena Johri, IAS, Joint Secretary, MoRD; Dr. W. R. Reddy, IAS, Director General, NIRDPR; Mr. Salehuddin Ahmed, Former Governor of Bangladesh Central Bank, Bangladesh; Shri Ravi Sankar, IFS (Retd.); Mr. Meleti Raimuria Bainimarama, Last Chairperson Permanent Secretary for Ministry of Rural Development, Fiji; Shri. Eng. Wassfi Hassan El-Sreihin, Secretary General, AARDO; Dr. P. SivaRam, Professor & Head, CRI (2nd row 1st from left); Dr. R. Ramesh, Associate Professor, CRI (2nd row 1st from right) with other delegates

Climate change is the defining issue of this time and the world is at a pivotal moment. From shifting weather patterns that threaten food production to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale. Without immediate drastic action, adapting to these impacts in the future will be difficult and costly.

Considering the above-mentioned concerns, the National Institute of Rural Development and Panchayati Raj (NIRDPR) organised a symposium on 'Climate Change Mitigation in CIRDAP Member Countries' and the 34th CIRDAP Technical Committee Meeting on 25th and 26th June, 2019 on its campus in Hyderabad to discuss measures that can help reduce the global climatic variability and change. Following this, the CIRDAP Technical Committee Meeting was held on 27th& 28th June, 2019.

This is the third time India is hosting the CIRDAP Technical Committee Meeting and this is the first time it is being hosted by NIRDPR. The last Technical Committee Meeting was held in Fiji. The Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) is a Bangladesh-based regional, inter-governmental and autonomous organisation with members from 15 countries in Asia and Pacific region. There is a need to share, discuss and expand networks on climate change and mitigation strategies, for adoption, including creating green jobs, green energy, and reduction in consumption of fossil oil by creating awareness among people.

In a message shared during the occasion, which was read by Dr. W. R. Reddy, IAS, Director General, NIRDPR, Shri. Narendra Singh Tomar, Honourable Union Minister of Rural Development, Agriculture Farmers Welfare and Panchayati Raj, Government of India, said, "I am happy to note that the Technical Committee is meeting for the third time in India and that representatives of 14 countries are taking part. The symposium on Climate Change Mitigation in CIRDAP Member Countries' has come at the right time. We, the members of CIRDAP countries, with a combined population of 2,549 million, account for 34 per cent of global population. We, with our activities, will be impacting a combined rural population of 1,539 million in CIRDAP member countries. India, under the leadership of the Honourable Prime Minister Shri Narendra Modi, is striving to create peaceful, friendly and mutually supportive relations with all countries. India has made an all-out effort to support activities of CIRDAP through technical and financial support."

Addressing the symposium, Shri Tevita G. Boseiwaqa Taginavulau, Director-General, CIRDAP, Bangladesh, said, "India is a founding member of CIRDAP, which was established in 1979. Since then, India has been a major pillar in ensuring CIRDAP's relevance and visibility amongst its member countries and outside its periphery. Till date, it pays the highest membership contribution to the tune of USD 95,000."

Societal resilience and adaptability is crucial to withstand 'shocks' of climate change. Along with mitigation measures, the focus must be on rural adaptability and livelihood. Nearly 70 per cent of the population in developing countries

CIRDAP session in progress

Delegates with Director General and Deputy Director General, NIRDPR

Dignitaries releasing a Coffee Table Book titled 'Creating a Masterpiece: Using Appropriate Building Technologies' published by RTP, CIAT during CIRDAP Technical Committee Meeting and Symposium

can be categorised as 'rural'. These are the people most affected by climate change since they are closest to nature. Ecosystem disturbances such as water scarcity and resultant droughts are some of the 'shocks' faced by people in the State. India's flagship rural employment programme, MGNREGS, is playing a crucial role in combating such an impact by providing mitigation measures such as water conservation and tree plantation, while providing employment.

Also stressing on the need to adapt, Shri Nur Ahamed Khoda-ker, a representative from the Food and Agriculture Organisation (FAO) of the United Nations, said "climate change has been happening for long and adapting to the change is key. Climate-smart technologies are being developed by farmers across the world." Shri Tevita G. Boseiwaqa Taginavulau, Director General, CIRDAP, said, "We have all come together to share best practices with each other."

Key initiatives by some of the members include:

1. Fiji is coming out with 'Green Bonds'. Fiji is the first emerging market to issue sovereign green bond, raising 100 million Fijian Dollars, or US$ 50 million, to support climate change mitigation.

ECAL is another initiative by Fiji. Environment and Climate Adaptation Levy (ECAL), a consortium of taxes on prescribed services, items and income, helps fund critical work across Fiji to protect natural environment, reduce carbon footprint.

2. Indonesia has come out with strategies titled 'Disaster Resilient Villages'. This programme was started to ensure building resilience at the village level to disasters through the introduction of risk mapping and analysis, early warning systems and volunteer development.

3. Vietnam has brought about extensive change in cropping patterns and schedules, development of seed varieties tolerant to climate change conditions and utilisation of good agricultural practices such as fertiliser and pesticide saving measures, water saving measures, development of early warning climate information to farmers, etc.

As part of India's resolve to mitigate climate change, the government is leveraging green technologies. For instance, India has completed about 31,000 km of the road utilising new technology including the technology of recycled plastic, India has used about 5,120 tonnes of recycled plastic in laying of roads, thus saving carbon emissions to the extent of 7,680 tonnes. Dr. W. R. Reddy, IAS, Director General, NIRDPR chaired the TC meeting. Smt. Radhika Rastogi, Deputy Director General, NIRDPR was the representative from India. Prof. Jyothis Sathyapalan and Prof. Ravindra S. Gavali from NIRDPR presented papers on climate change mitigation in India. The symposium was coordinated by Dr. P. SivaRam, Professor and Head, CRI.

Capacity Building on Evaluation of Development Programmes in Collaboration with Michigan State University

Clock-wise from left: Dr. W. R. Reddy, IAS, Director General, NIRDPR (1st row, 4th from left), Smt. V. Usha Rani, IAS, Director General, MANAGE (1st row, 5th from left), Dr. G. V. Raju (1st row, 1st from left) with the participants of the workshop

National Institute of Rural Development and Panchayat Raj (NIRDPR) and National Institute of Agricultural Extension Management (MANAGE) in collaboration with Michigan State University have jointly organised the first phase of training-cum-workshop on 'Capacity Building on Evaluation of Development Programmes' during 17 - 22 June, 2019 at NIRDPR. The programme was aimed at equipping evaluation personnel belonging to rural and agriculture development sectors with enhanced knowledge and appropriate skills on monitoring and evaluation with a focus on improved enablement of understanding to explain evaluation principles, models and techniques; develop and demonstrate skills in identifying indicators of extension programme success; plan an evaluation project independently, to include selection of appropriate methods and techniques of data collection and analysis (both quantitative and qualitative); implement an evaluation project of a relevant rural/agricultural development programme/project; develop skills in data collection, data cleaning and data analysis, and apply those skills to their evaluation project, by interpreting the data, writing an evaluation report and sharing the findings with stakeholders.

Keeping in view of the above, this programme was designed for providing practical hands-on training with primary project objectives to:

(i) Build local capacity to plan, conduct and write reports for evaluation of agricultural and rural development projects and programmes

(ii) Share evaluation project results with implementing agencies and external audiences

(iii) Develop robust training modules to build programme evaluation capacity for agricultural and rural development programmes; with the following main components of activities:

1. Conducting two integrated workshops (evaluation training including evaluation proposal development, data collection, data analysis techniques and evaluation case study reporting) with carefully selected participants from rural development and agriculture sectors.

2. Supporting participant implementation of evaluation projects through e-mail and WhatsApp communication, which will be published as case studies, and incorporate these case studies in the evaluation training manual.

3. Sharing evaluation project results with implementing agencies and external audiences.

This project uses two phases of integrated workshops, with participants expected to complete significant work between workshops. In the first phase (17-22 June, 2019), thirty two professionals/ faculty from agriculture and rural development sectors were nominated by NIRDPR and MANAGE to participate in the six-day hands-on training. It has covered various topics related to rationale for evaluation of rural development project and its activities, and the use of evaluation results to improve future rural development programmes to enhance food security, promote employment and increase household income including concepts and principles of project formulation, project appraisal, evaluation approaches and models, steps in the evaluation process, philosophy and ethics in evaluation, methods for evaluating both social and economic impacts of rural and agricultural development and/or food security programmes, qualitative and quantitative approaches, appropriateness of instrument selection to best evaluate the research question or hypothesis, identification of indicators for the success of programme, sampling concepts, data collection and data.

The participants at the end of first phase have developed 32 evaluation plans appropriate for the need of knowing the progress of outputs, effectiveness in delivery of outcomes and impact assessment at various stages of programme implementation of local relevance. The participants will carry forward the work assigned after submission of detailed proposals approved for evaluation over a period of six months under the supervision and mentoring of resource persons. The second phase of workshop is proposed to be organised during second week of February, 2020 at MANAGE. During this phase (second workshop), focus would be on data analysis (both quantitative and qualitative), interpretation of results and report writing along with the presentation of individual evaluation project results. After final revisions by resource persons, these reports will be shared with respective organisations and included in the project annual reports for publication.

The first phase of programme was inaugurated by Dr. W. R. Reddy, IAS, Director General, NIRDPR and Smt. V. Usha Rani, IAS, Director General, MANAGE. Dr. Murari Suvedi, Professor at Michigan State University played a key role of being the training lead along with Dr. P. V. K. Sasidhar, Professor and Director of Extension and Development Studies, Indira Gandhi National Open University (IGNOU) and Dr. P. Seetharaman Siva Kumar, Principal Scientist, Central Tuber Crops Research Institute (ICAR-CTCRI), Dr. G. V. Raju, NIRDPR and Dr. Saravanan Raj, MANAGE being other resource persons. Dr G. V. Raju, Professor and Head, Centre for Planning, Monitoring and Evaluation, NIRDPR coordinated the programme.

NIRDPR observes International Day of Yoga





Academic and non-academic staff, students, participants of various training programmes and other residents of the campus performing yoga on International Day of Yoga

A one-and-a-half hour yoga session marked the International Yoga Day celebrations at the National Institute of Rural Development and Panchayati Raj, Hyderabad. The session organised at the Sports Complex of the Institute from 8 AM- 9.30 AM on June 21 saw participation of academic and non-academic staff, their family members, students, participants of various training programmes and other residents of the campus.

Dr. W. R. Reddy, IAS, Director General, NIRDPR inaugurated the session. In his brief address, he said everyone should devote time to perform yoga, which is an ancient practice formulated for better physical and mental health. By organising the International Yoga Day celebrations, the government is giving an opportunity for us to learn more about yoga and everyone should utilise it, he said.

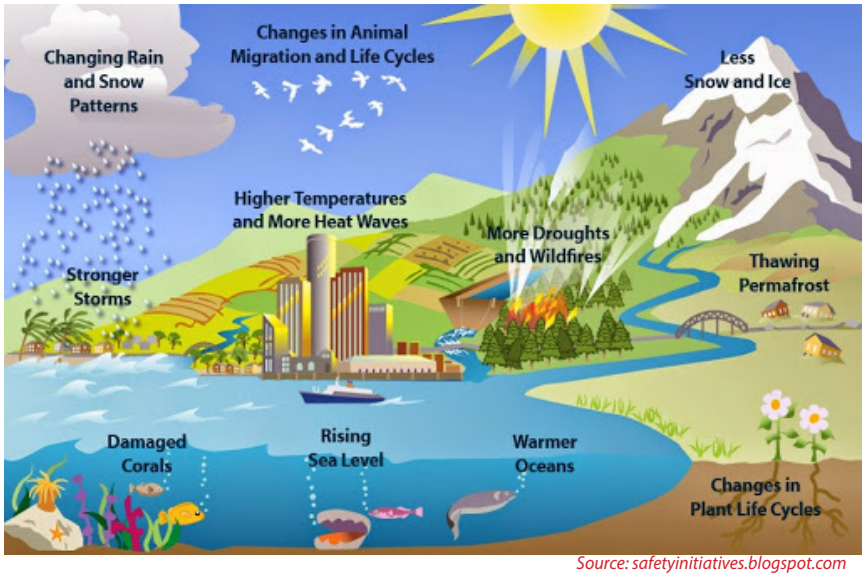
The DG further wanted the staff members to make full use of one-hour regular yoga sessions arranged at the Institute.

Yoga instructor Mr. Anil G. led the following session. Dr. P. SivaRam, Professor & Head, Centre for Livelihoods and Centre for Human Resource Development delivered a short speech on the benefits of yoga and demonstrated various asanas for the rest of the participants.

The programme ended with a vote of thanks by Mr. Anil G. and Dr. P SivaRam.

-CDC Initiatives

Environmental Conservation and Human Responsibility



Source: safetyinitiatives.blogspot.com

The environment is everything (living or non-living) that is around us and affects our ability to live on the earth, which includes physical, chemical and other natural forces. The environmental factors that influence the living organisms on earth are ecological factor or eco-factor, abiotic or biotic, ambient temperature, amount of sunlight, and pH of the water-soil in which an organism lives.

Nature plays a critical role in providing food and feed, energy, medicines, and genetic resources and a variety of materials fundamental for people's physical well-being and for maintaining culture. Nature, through its ecological and evolutionary processes, sustains the quality of the air, fresh water, and soils on which humanity depends, regulates the climate, provides pollination, pest control and reduces the impact of natural hazards. Nature will be endowed with the quality of life by providing basic life support for humanity (regulating), as well as material goods (material) and spiritual inspiration (non-material). Most of nature's contributions to people are co-produced by biophysical processes and ecological interactions with anthropogenic assets such as knowledge, infrastructure, financial capital, technology and the institutions that mediate them.

Understanding and monitoring biological evolutionary changes is an important criterion for informed policy decisions. Sustainable management strategies can influence the evolutionary trajectories to protect vulnerable species and reduce the impact of unwanted species (such as weeds, pests or pathogens). The evidence of the decline in geographic distribution and population sizes of many species indicates that the evolutionary adaptation is not sufficient to mitigate human-induced extinctions.

Humans are both creatures and molders of the environment. Through the rapid acceleration of science and technology, humans have acquired the power to transform their environment in countless ways and on an unprecedented scale. The protection and improvement of the human environment is a major issue, which affects the well-being of people and economic development throughout the world. Much of the world's terrestrial wild and domesticated biodiversity lie in areas traditionally managed, owned, used or occupied by indigenous peoples and local communities. In spite of efforts at all levels, nature on indigenous lands is declining less rapidly than elsewhere.

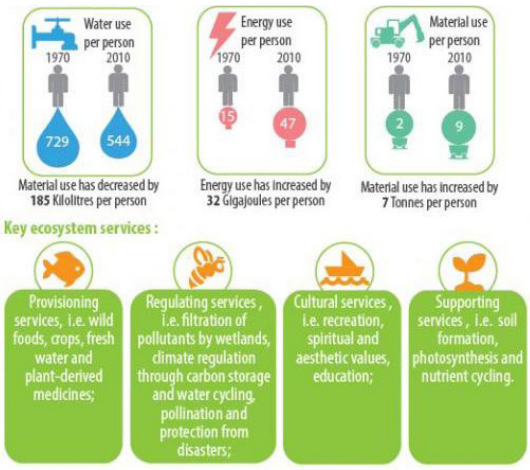
Threats to Environment

The rate of global change in nature during the past 50 years is unprecedented in human history. The direct drivers of change in nature with the largest global impact are changes in land and sea use, direct exploitation of organisms, climate change, pollution and invasion of alien species. These five direct drivers resulted in an array of underlying causes including production and consumption patterns, human population dynamics and trends, trade, technological innovations, and global governance.

Land-use change in terrestrial and freshwater ecosystems has the largest relative negative impact on nature, followed by overexploitation of animals, plants and other organisms. In marine ecosystems, exploitation of fish, shellfish and other organisms, pollution from river networks, coastal development for infrastructure, sea-use change and aquaculture are other reasons. Agricultural expansion and urbanisation are the most widespread form of land-use change, the unprecedented expansion of infrastructure linked to the growing population and consumption has come mostly at the expense of forests, wetlands, and grasslands. In freshwater ecosystems, a series of combined threats that include land-use change, water extraction, exploitation, pollution, climate change, and invasive species, are prevalent.

The anthropogenic elements impacting the environment are overconsumption, overexploitation, pollution, deforestation, technology, agriculture, high quantity of exhaust gases (CO_2, SO_2 and NH_3) causing global warming, deforestation, industrialisation and mining, chemical effluents from industries which are released directly into nearby streams without treatment creating river pollution and causing harm to aquatic life, transport, unprecedented construction, secondary pollutants, ruinous agricultural practices, population explosion, unplanned land-use policies, etc.

The above-stated anthropogenic factors are having the following environmental impacts like changes in biophysical environments and ecosystems, biodiversity, and natural resources, including global warming, environmental degradation, mass



Source: Unenvironment.org

extinction and biodiversity loss, ecological crisis, and ecological collapse. Of these, global warming and biodiversity loss pose an existential risk to the human race. It is estimated that more than 50 per cent of all Wildlife has been lost in the last 40 years. By 2020, 68 per cent of the world's wildlife will be lost. A study published in Proceedings of the National Academy of Sciences of the United States of America reported that 83 per cent of wild mammals, 80 per cent of marine mammals, 50 per cent of plants and 15 per cent of fish have been lost since the dawn of human civilisation. Currently, livestock makes up 60 per cent of the biomass of all mammals on earth, followed by humans (36 per cent) and wild mammals (4 per cent). According to the 2019 global biodiversity assessment by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, human civilisation has pushed one million species of plants and animals to the edge of extinction, with many of these projected to vanish over the next few decades.

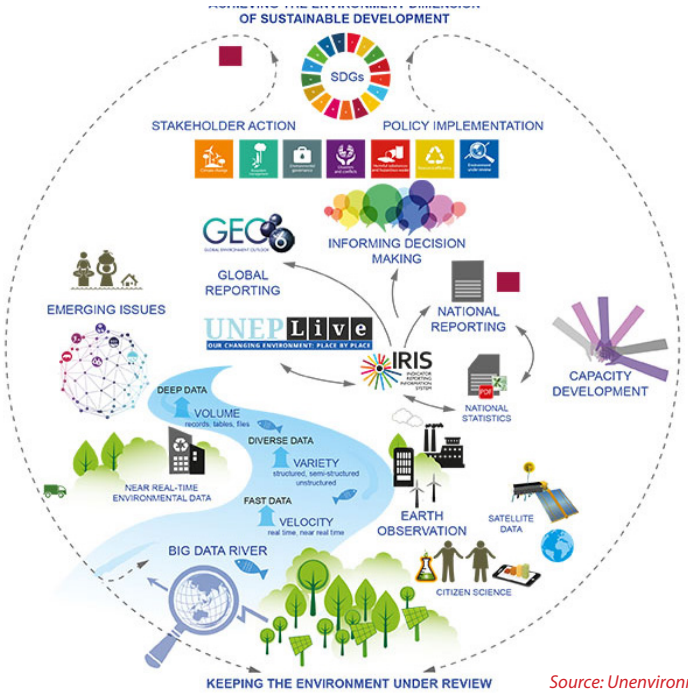
Climate change is a direct driver that is increasingly exacerbating the impact of other drivers on nature and human well-being. The estimated warming is approximately 1.0°C by 2017, when compared to pre-industrial levels, with average temperatures over the past 30 years rising by 0.2°C per decade. The frequency and intensity of extreme weather events and the fires, floods, and droughts have increased in the past 50 years, while the global average sea level has risen by 16 to 21 cm since 1900. These changes have widespread impacts on many aspects of biodiversity, species distributions, phenology, population dynamics, community structure and ecosystem function. According to observational evidence, the effects are accelerating in marine, terrestrial and freshwater ecosystems and are already impacting agriculture, aquaculture, fisheries and nature's contributions to people. Marine plastic pollution has increased tenfold since 1980, affecting at least 267 species, including 86 per cent of marine turtles, 44 per cent of seabirds and 43 per cent of marine mammals. This can affect humans through food chains.

An average of around 25 per cent of species in the assessed animal and plant groups are threatened, around one million species are already facing extinction, many within decades, unless action is taken to reduce the intensity of drivers of biodiversity loss. Without such action, there will be a further acceleration in the global rate of species extinction, which is already at least tens to hundreds of times higher than it has averaged over the past 10 million years.

Biodiversity of India

India is one of the mega biodiversity countries of the world. It contains over 7 per cent of the world's biodiversity on 2.5 per cent of the Earth's surface. This diversity has attributed to the vast variety of landforms and climates resulting in habitats ranging from tropical to temperate, and from alpine to desert. The number of plant species in India is estimated to be over 45,523 representing about 11.8 per cent of the world's flora. These include over 17,500 flowering plants of which 4,950 species (32 per cent) are endemic to the country. India is also one of the world's eight centres of origin of cultivated plants. India has 51 species of cereals and millets, 104 species of fruits, 27 species of spices and condiments, 55 species of vegetables and pulses, 24 species of fibre crops, 12 species of soil seeds, and various wild strains of tea, coffee, tobacco, and sugarcane.

India's faunal wealth is equally diverse. The total number of animal species is estimated at 91,307,



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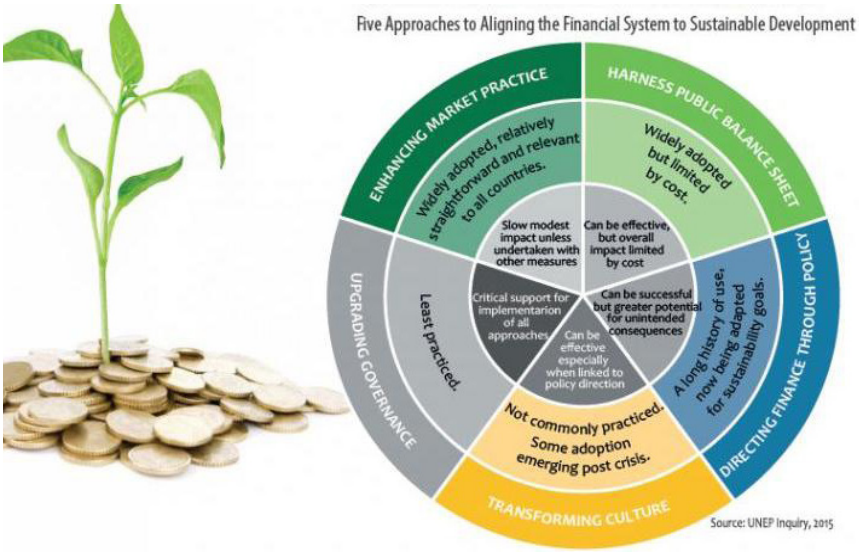

Source: Unenvironment.org

representing about 7.46 per cent of the world's fauna. India's known animal diversity includes about 8,61,696 insects, 21,723 fish, 240 amphibians, 460 reptiles, 1,232 birds and 397 mammals. It also includes about 86,413 invertebrates. The ancient practice of domesticating animals has resulted in India's diverse livestock, poultry, and other animal breeds. India has 26 breeds of cattle, 40 breeds of sheep, 20 breeds of goats, 8 breeds of camels, 6 breeds of horses, 2 breeds of donkeys and 18 breeds of poultry birds.

India is the fastest-growing economic region in the world and is home to some of the smallest and poorest and some of the largest and richest. Rapid urbanisation, affluent lifestyles and increased demand for resources and services exerting increasing pressure on land and natural resources are challenging the sustainability of the region's development.

As per the recent studies 92 per cent of people worldwide do not breathe clean air and air pollution costs the global economy $5 trillion every year in welfare costs. Because of air pollution, ground-level ozone pollution is expected to reduce staple crop yields by 26 per cent by 2030.

Environmental Protection in India

The need for protection and conservation of the environment and sustainable use of natural resources is reflected in the constitutional framework of India and also in the international commitments of India. The Constitution casts a duty on every citizen of India to protect and improve the natural environment including forests, lakes, rivers, and wildlife, and to have compassion for living creatures. Further, the Constitution of India stipulates that the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.

Several legislations for environmental protection are existed even before the Independence of India. However, a well-developed framework came only after the UN conference on the human environment. The National Council for Environmental Policy and Planning was set up in 1972 within the Department of Science and Technology to establish a regulatory body to look after the environment-related issues. This Council later evolved into a full-fledged Ministry of Environment and Forests in 1985 and later transformed into MoEF&CC. It is the apex administrative body in the country for regulating and ensuring environmental protection and laying down the legal and regulatory framework for the same. Since the 1970s, a number of environment legislations have been put in place. The MoEF&CC and the Pollution Control Boards (PCBs) together form the regulatory and administrative core of the sector.

Some of the important legislation for environment protection are as follows:

- The Wildlife Protection Act, 1972
- The Water (Prevention and Control of Pollution) Act, 1974
- The Forest Conservation Act, 1980
- The Air (Prevention and Control of Pollution) Act, 1981
- The Environment Protection Act, 1986
- The Biological Diversity Act, 2002
- The National Green Tribunal Act, 2010
- Hazardous Wastes Management Regulations. Some of the rules dealing with hazardous waste management are:
- Biomedical Waste (Management and Handling) Rules, 1998
- Municipal Solid Wastes (Management and Handling) Rules, 2000
- Hazardous Wastes (Management, Handling and Transboundary) Rules, 2008
- Batteries (Management & Handling) Rules, 2001
- E-Waste (Management and Handling) Rules, 2011
- Public Liability Insurance Act, 1991
- Coastal Regulation Zone (CRZ) Notification

Way Forward

The efficient and sustainable use of natural resources reduces degradation on the environment and brings social and economic benefits to the people. This approach gives innovative and impactful solutions to environmental challenges. The integrated approach of sustainable development including economic, social and environmental is essential to overcome the above-said issues and through the implementation of Sustainable Development Goals (SDGs).

There is a need for cooperation and coordination between the national and local authorities, civil society, UN entities, financial institutions, regional bodies

and networks, research institutions and the private sector. Clean Development Mechanism (CDM) and carbon credits are being created to prevent further damage and to encourage protection of the environment.

Feeding humanity and enhancing the conservation and sustainable use of nature are complementary and closely interdependent goals that can be advanced through sustainable agricultural, aquaculture and livestock systems, the safeguarding of native species, varieties, breeds and habitats, and ecological restoration. Land-based climate change mitigation activities can be effective in supporting conservation goals. However, the large-scale deployment of bioenergy plantations and afforestation of non-forest ecosystems can come with negative side effects for biodiversity and ecosystem functions. Nature-based solutions with safeguards are estimated to provide 37 per cent of climate change mitigation until 2030 needed to meet 2°C goals with likely co-benefits for biodiversity.

The global environment can be safeguarded through enhanced international cooperation and linking relevant measures at local. The interventions such as incentives and capacity building; cross-sectoral cooperation; pre-emptive action; decision-making in the context of resilience and uncertainty and environmental law and implementation can generate transformative change by tackling the underlying indirect drivers of nature deterioration.

Dr. V. Srinivasa Rao
Training Coordinator, CNRM
Dr. V. Suresh Babu
Associate Professor, CCC&DM

Library Talks on Eliminating Stress through Transcendental Meditation

Shri Anil G. delivering a talk on 'Eliminating Stress through Transcendental Meditation'

Transcendental Meditation technique

The Transcendental Meditation technique or TM is a form of silent mantra meditation, developed by Maharishi Mahesh Yogi. The meditation practice involves the use of a mantra and is practiced for 20 minutes twice per day while sitting with one's eyes closed. It is one of the most-widely practiced, and among the most widely researched meditation techniques, with over 340 peer-reviewed studies published. Beginning in 1965, the Transcendental Meditation technique has been incorporated into schools, universities, corporations, and prison programmes in the United States, Latin America, Europe, and India. In 1977, a U.S. federal district court ruled that a curriculum in TM and the Science of Creative Intelligence (SCI) being taught in some New Jersey schools was religious in nature and in violation of the First Amendment. However, the technique has since been included in a number of educational and social programmes around the world. (Source: Wikipedia)

The Centre for Development Documentation and Communication had initiated 'Library Talks' as a platform to facilitate talks by faculty members as well as resource persons on diverse topics.

Coinciding with the 5th International Day of Yoga, a talk by yoga instructor Shri Anil G. on the topic 'Eliminating Stress through Transcendental Meditation' was organised at the Library Hall on June 21, 2019.

Shri. Anil G., who also handles the regular yoga sessions at NIRDPR, began his lecture stating that 15 million people around the world practise transcendental meditation.

Veda is the blueprint of knowledge and transcendental meditation has its roots in Vedas. Nearly 800 research papers have been published on the topic. This meditation technique does not involve contemplation or concentration. It provides physical and mental well-being, he said.

Stress affects power of mind. Transcendental meditation technique improves brain functioning and gives the practitioners deep rest, especially boundless relaxation to the nervous system.This technique can be a remedy to psychosomatic disorders and also has the ability to dissolve deep-rooted stress and strain. It reduces risk of cardiovascular diseases. Reports say patients with coronary heart disease who practiced TM technique had nearly 50 per cent lower rates of heart attack, stroke, and death compared to non-meditating controls, he pointed out.

Transcendental meditation helps normalisation of body weight and improves both personal and professional relationships, he added.

Senior Librarian Dr. M. Padmaja proposed vote of thanks. Smt. Radhika Rastogi, IAS, Deputy Director General, Dr. Akanksha Shukla, Head, CDC, faculty members and non-academic staff attended.

-CDC Initiatives

Two-day workshop on District Specific SBCC Planning and Implementation for ODF Sustainability in Telangana

Dr. W. R. Reddy, IAS, Director General, NIRDPR (1st row, 4th from left) and Dr. Gyanmudra, Professor & Head, CGGPA (1st row, 5th from left) along with the participants of the workshop

Swachh Bharat Mission is the flagship programme of Government of India with a mission to end open defecation in the country that has accomplished significant status with regards to construction of IHHLs. However, sustaining this momentum in terms of using and maintaining these toilets requires a great deal of behaviour change in the communities.

Dr. Gyanmudra, Professor & Head, CGGPA and Director, Communication Resource Unit, NIRDPR, in collaboration with UNICEF had organised three, two-day workshops on developing district-specific SBCC planning and implementation for ODF sustainability in Telangana for 10 districts. The objectives of the workshops were to enhance knowledge on social mobilisation process, IPC skills and use of social media and develop a costed SBCC micro plan and monitoring and reporting with regard to ODF sustainability in the districts.

Participants from 10 districts attended the two-day workshop in three batches during 29th and 30th of May, 3rd& 4th June and 2nd and 3rd of July, 2019. The districts include Bhadradri Kothagudem, Nirmal, Nagar Kurnool, Mahaboobnagar, Mahabubabad, Adilabad, Mancherial, Jogulamba Gadwal, Komaram Bheem Asifabad and Jayashankar Bhupalpally.

Officials from line departments like PR&RD, ICDS, Education, Health and SERP from districts attended the workshop and shared their views in developing district-specific convergent costed plans. The profile of the participants include District Swachh Bharat Mission Coordinator, SBM IEC Consultant, Assistant Project Director DRDA, Addl. DRDO SERP, APM SERP, SB Prerak, District Education Officer, Sectoral Officer – SSA, School Headmaster, CDPOs, ACDPOs, DMHOs, Health Extension and Education Officer (HEEOs).

In her opening remarks, Dr. Gyanmudra stressed that by 2nd October 2019 every village should be declared as open defecation free and invited all the participants to utilise the opportunity in developing an effective SBCC plan for respective districts. Dr. W. R. Reddy IAS, Director General, NIRDPR addressed the participants and emphasised that communication approach is required to solve the challenge of ODF sustainability and ODF+. Every opportunity in ODF/SBM should be worked out like business opportunity mode to make it sustainable and efforts should be taken to develop sustainable plan. He said "as new GPDPs will be planned from October for the year 2021, I request all the participants to incorporate this in thier SBCC plan in GPDP." Ms. Seema, C4D Specialist of UNICEF presented the SBCC framework for WASH and ODF sustainability. She highlighted that SBCC plan is not enough and it should be applied further while implementation to sustain the momentum.

During the workshop, deliberations took place on overview of SBM activities in the State and experiences of districts on highlights and challenges of different IEC activities planned and implemented. The participants were briefed on the tools and techniques on campaign media planning and further they were divided into district-wise groups to develop the Gram Panchayat, mandal and district level costed SBCC micro plans based on the district-specific data to make it more scientific along with the district's priorities. To aid the campaign, participants were introduced to communication package developed by UNICEF. Districts presented

and finalised plans respective to their own district's activities including IPC, mid media, mass media from village, mandal to district level by involving individuals, stakeholders and line departments. The plan developed has department/ official responsible for each of the activity for the monitoring purpose. Required communication material such as posters, pamphlet, banner, etc., were calculated and costed accordingly.

Participants were overviewed on State-led mid media campaign on ODF. This includes the video van support from UNICEF to these 10 districts to reach out to the mandals and villages, which are lagging in ODF and to increase knowledge and awareness, counter myths and misconceptions on ODF, influence perceptions, beliefs, attitudes on safe sanitation practices and prompt action, trigger an individual to adopt and maintain healthy behaviour sanitation practices.

The workshop was concluded with vote of thanks by Dr. Gyanmudra. It was discussed that final plans with the covering note from NIRDPR will go to all district collectors and district SBM team to pursue to get the plan implemented. As agreed, the plans with the proceedings from NIRDPR were shared with the District Collectors of 10 districts to review at their end to adopt the plan for implementation.

Regional ToT programme on Social Accountability Tools for Good Governance

Dr. K. Prabhakar, Assistant Professor, CGGPA (1st row 3rd from left) with the participants of the training programme at HIPA

A regional ToT programme on Social Accountability Tools for Good Governance was organised by the Centre for Good Governance and Policy Analysis (CGGPA) during 10-14 June, 2019 at Himachal Pradesh Institute of Public Administration (HIPA), Himachal Pradesh.

Public policy is formulated and implemented in order to ensure social economic benefits in a welfare State. Public policy, an integral part of governance touches upon critical analysis to ensure efficient governance.

Good governance is about the processes for making and implementing decisions. It is not about making 'correct' decisions, but about the best possible process for making those decisions. Good governance is a combination of characteristics of accountability, transparency, following the rule of law, responsiveness, equitability and inclusiveness, effectively and efficiency, and participation.

Social accountability can be defined as an approach towards building accountability that relies on civic engagement, i.e., in which it is ordinary citizens and/or civil society organisations who participate directly or indirectly in exacting accountability (World Bank, 2004). The aim of this civic engagement is to stimulate demand from citizens and thus put pressure on the State or private sector to meet their obligations to provide quality services. The supply side of this equation is about building the State's capability and responsiveness, while implementing the same at different stages of the public financial management cycle.

Social accountability tools enable development practitioners to generate demand for and ultimately improve governance at the local, regional and national levels. Social accountability tools are essential for learning, as many of the

Participants attending various sessions of the training programme at HIPA

public policies are increasingly goal-oriented, aiming for decision-centric and measureable results and goals.

The importance of good governance will rely on successful delivery of the service to the public, especially to the rural poor. The improvement of governance is an everyday affair, in fact every minute affair and is a continuous process. Governance can be improved by using social accountability tools. These tools can make tremendous difference for the stakeholders and consumers. The relevance of one of the social accountability tool like social audit is that it can bring down corruption. Systematic improvement in governance can really help the clientele and that is possible only when we are in love with our work.

Prospectus of the Programme

- This specialisation will equip the participants with knowledge and help them use tools for their organisation in dispensing public services.

- The participants will learn the technical aspects of assessing public issues, including the involvement of stakeholders.

- The application of tools stimulates achievement of goals, fulfillment of duties and responsibilities, and promotes public faith and trust in public office.

- The sponsoring orgnisation will obtain identity and improve vision.

Regional ToT training programme aims at addressing the following objectives:

- To expose participants to the concept of welfare state and its policies

- To identify governance deficits and gaps in existing policies

- To enable participants to learn different social accountability tools

- To apply those tools for analysing existing flagship programmes of rural development

- To verify and establish the tools

- To equip the participants with knowledge and skills of social accountability tools for better service delivery

The training programmes covered the following modules:

- Concept, approaches and elements of good governance

- Concepts, approaches, rational and tools of social accountability

- Application of social accountability tools techniques: budget analysis, fund utilisation and participatory budgeting

- Application of social accountability tools techniques: Community Score Card (CSC)

- Application of social accountability tools techniques: Citizen Report Card (CRC)

This programme was scheduled to cover different topics related to 'Social Accountability Tools' by different subject experts. This included, covering the scope and need of social accountability tools for better service delivery, good governance; social accountability tools: introduction to Citizen Report Card (CRC), context

Defining issues/problems	Ramifications	Tools/Approaches
Monitoring/Accountability	- Weak institutional(formal)monitoring processes - Weak incentives for service delivery - Corruption and leakages	Citizen report cards Community score cards Social audits
Expenditure tracking	- Resources fail to reach intended beneficiaries	Participatory Expenditure Tracking Studies(PETS)
Budget allocation	- Spending on wrong goods - Wrong inclusion/exclusion of target groups	Budget analysis and advocacy

and rationale, features, applications, CRC methodology, designing a CRC – The Science of Surveys ; disseminating CRC findings, tips for effective advocacy, data collection for CRC and data analysis, etc., Community Score Card - describe the CSC tool and six key steps: preparatory groundwork; input-tracking scorecard; performance scorecard by the community; self-evaluation scorecard by service providers; interface meeting and action planning; institutionalisation; budget analysis; Public Expenditure Tracking Surveys (PETs) and Right Information Act (RTI), etc.

The training programme contents were delivered through a judicious mix of lecture-cum-discussion; role playing; debate; hands-on-training on CRC, CSC, budget analysis, group exercises and presentation by groups. Field test was planned after completion of the calls by teaching each tool.

Totally, 33 participants including district Project Officers (POs), DRDA officials, district panchayat officials, State and district resource person from Himachal Pradesh, State Social Audit Unit, Faculty of HIPA, scholars and faculty members from Himachal State University participated in the ToT programme. On final day, participants made a presentation on their training and field visit learning, especially focussing on Citizen Report Card (CRC) and Community Score Card (CSC) learning experiences.

During the valedictory of the course, participants shared the following experiences:

- Self-awareness of the importance of social accountability tools
- Disseminating the knowledge of the tools among colleagues
- Sensitising service providers, wherever possible, to go for SA tools for service delivery assessment
- People in academics can include this tool as part of lessons on monitoring and evaluation

Dr. K. Prabhakar, Assistant Professor, Centre for Good Governance & Policy Analysis (CGGPA) organised the five-day certificate training programme.

International Training Programme on Financing Small Enterprises for Rural Development

Dr. W. R. Reddy, IAS, Director General, NIRDPR (1st row, 5th from left), Dr. M. Srikanth, Associate Professor & Head, CFIE (1st row, 4th from left) and Dr. D. Ravi, Consultant, CICTAB (1st row, 6th from left) with the participants of the programme

The importance of MSME sector in the Indian economy is indisputable. This is equally applicable to the economies of other SAARC countries. Micro and small enterprises account for more than 90 per cent of total number of MSMEs in India. The relevance of small enterprises therefore plays an important role in various areas of Indian economy, including growth rate of GDP, exports, creation of employment and rural development. Accordingly, financing these small enterprises needs special attention from the government, banks and social organisations. As a matter of fact, developing countries need to focus on financing small enterprises so as to reduce poverty by helping the underprivileged to establish micro/ small enterprises. Providing rural finance on a large scale can help economic development, thereby achieving financial inclusion also. However, there is a need to provide skilling entrepreneurship development to the youth, in addition to facilitating availability of finance to ensure sustainability of the livelihoods. In view of the above background, CFIE organised a five-day training programme on 'Financing Small Enterprises for Rural Development' during 10-14 June, 2019 at NIRDPR, Hyderabad in collaboration with CICTAB, Pune.

The broad objectives of the programme were:

Dr. M. Srikanth interacting with the participants of the programme

- To sensitise participants on financing of small enterprises for rural development and policies, strategies and programmes in India
- To help participants appreciate the role of financial institutions in rural development in the context of their managerial challenges and business opportunities
- To enable the participants to understand the best practices being followed by financial institutions in India, while financing small enterprises for rural development

The programme was inaugurated by Dr. D. Ravi, Consultant, CICTAB, Pune. Welcoming the participants, he gave a brief overview of the programme, spelt out its objectives and conducted a self-introductory session.

Contents of the programme

- Skilling for rural India
- Renewable energy: Recent developments and way forward
- Role of FPOs in promoting sustainable livelihoods and inclusive growth
- Rural entrepreneurship-frugal innovations
- Agri value chain financing with special focus on food processing industries in India
- Financial literacy: Tool for enhancing financial inclusion
- Application of geo-informatics in rural development
- Financing micro small enterprises for rural development
- Contribution of small enterprises to rural development
- Creation of sustainable rural livelihoods

Participants

A total number of 16 participants from Bangladesh (2), Nepal (12) and Sri Lanka (2) participated in the programme. It was partly sponsored by CICTAB, Pune.

Resource Persons/Faculty

CFIE's in-house faculty members and guest faculty contributed as subject matter specialists to the programme.

Methodology

A range of training methodologies, as shown below, were used during the programme, duly keeping in view the broad and specific objectives of the programme, duration and expectations of the participants.

- Lectures and interactive sessions (PPTs)
- Group discussions/Case studies on various topics
- Video clips and discussions
- Individual and group activities/ exercises
- Recap sessions
- Field visits

Field Exposure Visit

To impart practical knowledge and reinforce the learning made in the classroom, the following field visit was organised during the programme:

Rural Self Employment Training Institute (RSETI), Chilukuru, Ranga Reddy district.

On 12 June, 2019, the participants along with CFIE team visited RSETI at Chilukuru village in Ranga Reddy district. With the aim of mitigating unemployment problem amongst the youth, particularly those below the poverty line, Sri Dharmasthala Manjunatheshwara Educational Trust, with the support of commercial banks set up Rural Development and Self Employment Training Institute (RUDSETI) in 1982, at Dharmasthala in Karnataka. RUDSETI has become a replicable model. MoRD in collaboration with the Lead banks of the respective districts, set-up RSETIs across all districts of the country. RSETIs train youth to launch profitable micro-enterprises and enhance their own standards of living, thereby contributing to the overall national economy. The visit to RSETI, Chilukuru, made participants understand the different activities taken up by RSETIs in empowering youth with self employment. They interacted with the director and participants of the training programmes at RSETI. Participants of CICTAB were very impressed by the model of RSETIs and products put to sale at RSETI, Chilukuru, crafted by trainees of RSETI.

The programme was a success, as per the feedback received from the participants. All participants felt that the training was useful in many ways. They were delighted about the field visit, which helped them to gain practical knowledge in dealing with small enterprises, how well things could be managed by following the methodologies adopted by RSETI, Chilukuru.

The programme was coordinated by Dr. M. Srikanth, Associate Professor & Head, CFIE, and Dr. A. Bhavani, Consultant, CFIE.

Dr. Neha Kumar, IFPRI delivers talk on Women Improving Nutrition through Group-based Strategies (WINGS): Strengthening the conceptual and empirical basis

Dr. Neha Kumar, Sr. Research Fellow, IFPRI addressing the session. Dr. W. R. Reddy, IAS, Director General, NIRDPR, Smt. Radhika Rastogi, IAS, Deputy Director General and Dr. Sucharita Pujari, Assistant Professor, CPGS&DE are also seen

Dr. Neha Kumar, Senior Research Fellow in the Poverty, Health and Nutrition Division at the International Food Policy Research Institute is currently leading a portfolio of projects in India and Bangladesh examining the linkages between Agriculture, Nutrition and Gender. Dr Neha Kumar was invited for a talk on the potential of leveraging women's self-help groups as a platform for delivering nutrition messages in India and globally at NIRDPR on 24th June, 2019.

The session held at SK Rao Hall started with a welcome speech and brief introduction of Dr. Neha Kumar, delivered by Dr. Sucharita Pujari, Assistant Professor, CPGS&DE, NIRDPR. Dr. W R Reddy, IAS, Director General and Smt. Radhika Rastogi, Deputy Director General (DDG) chaired the session. After the formal welcome by the Director General, Dr. Neha Kumar addressed the gathering and presented her research paper titled 'Women Improving Nutrition through Group-based Strategies (WINGS): Strengthening the conceptual and empirical basis' using PowerPoint presentation.

The session began by reiterating why to invest in women's collectives and how the project WINGS will help in filling the gaps by collecting missing evidences on the pathways through which women's collectives can help achieve desired outcomes. WINGS is a five-year project (2015-2020) in partnership with PRADAN, Public Health Resource Network (PHRN), IFPRI, and Oxford Policy Management. Evaluating an SHG-agriculture-nutrition intervention implemented by PRADAN to strengthen the conceptual and empirical understanding of the pathways through which SHGs can improve nutrition; and engaging with diverse audiences to strengthen dialogue and uptake of research findings on agriculture-nutrition-gender linkages are the two major components of the WINGS study. A mixed method approach is adopted for the study by evaluating the nutrition intensification intervention of PRADAN (Impact evaluation approach) with a standard & control group quantitatively and by evaluating the process (Process evaluation approach) to qualitatively analyse the pathways that emerge as impact of the project.

A conceptual framework was developed to identify pathways of PRADAN's intervention to improve body mass index and dietary diversity of women collectives and a paper titled 'Pathways from women's group-based programmes to nutrition change in South Asia: A conceptual framework and literature review' is published in Global Food security in this regard by Dr. Neha Kumar and other co-authors. The paper presents that women's group programmes have the potential to improve nutrition but the pathways to nutrition are long and complex. The four potential pathways: income, food production, nutrition awareness and rights-based engagement; three cross-cutting pathways: social capital, acting collectively and women's empowerment form the core pathways identified.

This framework is developed by borrowing the conceptual framework of UNICEF on determinants of nutrition outcomes to help identify factors (immediate, underlying, basic) for nutrition and how these could be linked to women's groups (WGs) & TANDI framework of pathways between agriculture and nutrition, and the role

of gender (Kadiyala et al., 2014). Both of them helped to identify the entry points in women's groups importantly. Knowledge from field exposure was also applied for developing the framework which in turn helped to identify types of women's groups, inputs provided, processes triggered, outputs and outcomes attained that could link to nutrition.

A literature review was done to know more about the role of WGs in improving nutrition, factors along the impact pathways and the optimal combination of interventions to improve nutrition. The key findings from the review draw evidences that multisectoral programmes are required to address the multiple determinants of under nutrition in South Asia but the evidence base is limited and most studies don't provide insights on pathways. Thereby WINGS is designed as a rigorous and robust study to provide evidence on the potential of using an existing SHG platform to improve nutrition via nutrition-intensification of agricultural programmes.

Some results from intense examination and process evaluation are identified which include both positive changes and weak points. Positive changes among the Women Group members are: greater access to information, greater participation in agricultural decisions, increased political engagement, wider social networks, higher empowerment scores, lower gaps between men's and women's empowerment, greater control over income use, credit access and participation in credit decisions, greater mobility, high health and nutrition knowledge among the trainers and the Poshan Sakhis and likely recall rates of Behaviour Change Communication (BCC) messages among members than non-members. Critical weak points from the findings are: members have more workload, gender norms are slow to change, meetings are not held often enough, and messages are complex and hard to understand. So the need to improve soft skills and strengthen higher-level federations is high.

Throughout the presentation Dr. Neha Kumar shared her valuable experiences from the field as evidence to support the findings of the research conducted.

A question and answer session was held after the presentation, which helped the audience to clarify their doubts regarding the study shared by Dr. Neha Kumar. Some critical insights from Question and Answers session are mentioned below:

- Nutrition is multi dimensional and the practices of nutrition are not measured appropriately to capture the right impact.
- BCC by PRADAN is basically delivered to women but at times men and other family members are also engaged in health messaging.
- Context of interventions must be effective and meticulous to achieve the desired outcomes as WGs are burdened with various programmes.
- Barriers for effective last mile delivery of health messaging are yet to be identified by a qualitative survey as the knowledge of households about nutrition & health is low though frontline worker's understanding is high besides there are no mobilised forums for behaviour change as well.

In fact, few of the queries bought forward by the faculty and students of NIRDPR were even acknowledged by her. At the end of the session, the Deputy Director General honoured the guest. Dr. Sucharita Pujari, Assistant Professor, CPGS&DE, NIRDPR proposed the vote of thanks.

Students and faculty members interacting with Dr. Neha Kumar during the talk

Certificate course on Climate Change Adaptation Practices for Sustainable Livelihoods

Clockwise from left: Dr. W. R. Reddy, IAS, Director General, NIRDPR (1st row, 3rd from left) along with dignitaries releasing the course material of SLACC training programme; Field visits and sessions in progress

Two of the greatest current challenges we are facing today are climate change and food security. Achieving global food security whilst reconciling demands on the environment is a daunting task for humanity. Globalisation, economic growth, urbanisation and change in consumption habits will further increase the burden on natural resources. Lessons learnt from the Green Revolution are important to develop new paradigms of development for the future. Overall, it will require major efforts aimed at adaptation and mitigation. We need rapid strides and higher quality science to overcome the challenges and management of the natural resources to the climate change.

There are various adaptation and mitigation strategies tested and validated for the management of the resources. National and international institutes are working in promoting these strategies. Nonetheless, adoption of these technologies as climate resilient practices is limited. A special purpose vehicle/ framework for driving these practices is essential to improve the adoption at community level.

Sustainable Livelihoods and adaptation to Climate Change (SLACC) project has taken-up the role in dissemination of the climate resilient practices through Community Resource Persons (CRPs) and mission staff. The project is being implemented in Bihar and Madhya Pradesh where flood and drought conditions are prevailing. The project is supported by Special Climate Change Fund (SCCF) administered through Global Environment Facility (GEF). The project is been implemented by the World Bank and Ministry of Rural Development (MoRD) through National Rural Livelihoods Mission (NRLM).

The National Institute of Rural Development and Panchayati Raj (NIRDPR) has developed a certificate programme, a first of its kind, to train the CRPs and mission staff on climate resilient practices. NIRDPR propose to build capacity of 200 CRPs as master trainers in the States of Madhya Pradesh and Bihar. These CRPs will work with NRLM on regular basis and are long-term assets of the villages and NRLM. A package of 25 technology interventions is prioritised for farm-level climate resilience activities. These aim to reduce the farming cost, improve yield and income, profitability, empower women and generate employment. Centre for Natural Resource Management (CNRM) and Centre for Climate Change and Disaster Mitigation and Management (CCCDM) of NIRDPR has developed the training module and initiated programmes from June, 2019. Knowledge partners and experts from CRIDA-Central Institute of Dryland Agriculture, Hyderabad, National Academy of Agricultural Research Management (NAARM) have contributed for developing the training module. The training programme will be conducted for 8 batches (15 days each) during June to September, 2019.

The 1st and 2nd batch training programmes were organised from 6 – 22 June, 2019 and 12-28 June, 2019 for CRPs from Sheopur (37 nos.) and Mandla (40 nos.) at NIRDPR, Hyderabad. The programmes were coordinated by Prof. Ravindra S. Gavali, Dr. K. Krishna Reddy from CNRM and Dr. V. Suresh Babu from CCCDM. This certificate training programme aims to disseminate climate resilient practices through CRPs and improve the adaptation strategies in agriculture and rural livelihoods.

Dr. W. R. Reddy, IAS, Director General, NIRDPR gave the inaugural address. Dr. Usha Rani, IAS, Director General, MANAGE,

Hyderabad; Smt. G. Jayalakshmi, IAS, Director General, NIPHM, Hyderabad; Dr. Ravindra Chary, Director, CRIDA, Hyderabad and Shri B. K. Mishra, General Manager, NABARD, Hyderabad also shared their valuable thoughts during the inaugural programme addressing the need of the certification programme and mobilisation for adaptation to climate change.

Eminent speakers from different organisations viz., Central Research Institute for Dryland Agriculture (CRIDA), Professor Jayshankar Telangana State Agriculture University (PJTSAU), and ICAR-Directorate of Poultry Research, Hyderabad, State Rural Livelihoods Mission, Madhya Pradesh and faculty of NIRDPR were invited to train the CRPs. The training modules included basic notes on climate change and its impacts on agriculture and adaptation planning, different climate resilient technologies such as soil health management practices, seed treatment, zero tillage, integrated nutrient and pest management; organic farming; rice farming techniques (SRI, DSR, machine transplanting), farm pond and microirrigation; alternate livelihoods (Azolla, mushroom and nutrition garden), livestock and dairy farming; backyard poultry; rearing of small ruminants; fodder crops management; crop insurance and convergence of flagship programmes.

Apart from the classroom sessions, the CRPs were exposed to functional institutions for practical demonstrations on various climate resilient interventions at National Bureau of Plant Genetic Resource (NBPGR), National Institute of Plant Health Management (NIPHM), CRIDA research farm, NICRA-KVK, Kurnool and Gaddipally (National Innovations in Climate Resilient Agriculture), Indian Institute of Rice Research (IIRR), Indian Institute of Oilseed Research (IIOR), Livestock Research Centre at P.V. Narsimha Rao Telangana Veterinary University, Hyderabad; Vegetable Research Station and Biocontrol Unit of Professor Jayshankar Telangana State Agriculture University; Directorate Poultry Research (DPR), Hyderabad and Rural Technology Park (RTP), NIRDPR.

National institute of Agricultural Extension and Management (MANAGE) conducted the training assessment of participated CRPs and certified the successful candidates. The CRPs were provided with a tool kit which included course material in Hindi (SLACC- Training Manual for CRPs), teaching posters (25 no.) and CDs (containing reading material and video lectures) to aid in dissemination of technologies at field level.

Ms. Leena Johri, IAS, Joint Secretary, MoRD interacted with the CRPs (2nd batch) about the ongoing training programme. CRPs expressed that the programme is very unique and it would help them to sustain their livelihoods in changing climate conditions. CRPs appreciated the programme and they assured that they would adopt maximum interventions and train the other farmers to become climate smart farmers.

The programmes were coordinated by Prof. Ravindra S Gavali, Dr. K. Krishna Reddy and Dr. V. Suresh Babu.

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पंचायती राज संस्थान
NATIONAL INSTITUTE OF RURAL
DEVELOPMENT AND PANCHAYATI RAJ
Ministry of Rural Development, Government of India

Rajendranagar, Hyderabad - 500 030
Phone: (040) 24008473, Fax: (040) 24008473
E-mail: cdc.nird@gov.in, Website: www.nirdpr.org.in

Dr. W.R. Reddy, IAS, Director General, NIRDPR
Smt. Radhika Rastogi, IAS, Deputy Director General, NIRDPR

Asst. Editors: Krishna Raj K.S.
Victor Paul

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