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SIGMA FOUNDATION

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WHO WE ARE...

Support for Improvement of Governance and Monitoring Advancement (SIGMA) Foundation is a 'not for profit' society. It was established in the year 2014 for serving the society in various ways with the initiative of Dr. M. N. Roy, the Founder-President of the organisation. To strengthen the activities of the organisation, it was registered under the West Bengal Society Registration Act in the year 2017 and was given the Registration No. S/M/ No. 5053 dated the 4th September of 2017-18. The vision of the organization is a poverty free India with equity and justice, where each child can access opportunities to grow to his/her full potential, enjoy all the rights as citizen and be responsible for making the society better and sustainable. SIGMA Foundation has a mission to improvise the wellbeing of the people with sustainability as well as equity. Keeping that in mind, it takes up various activities for improving governance towards enhancing both efficiency and effectiveness of the service delivery towards the poor and vulnerable sections of the society.

The organization has specialization in disciplines related to various social and economic development. Its area of expertise includes Monitoring & Evaluation, application of ICT, Real Time Monitoring through Mobile Telephony and GIS, analyses of big data generated through programme MIS and its interpretation for decision support, public health including nutrition, maternal and child healthcare, WASH, management of solid and liquid wastes, management of drinking water supply along with quality monitoring, strengthening Panchayats and decentralized planning, alleviation of rural poverty, natural resources management and improvement of environment. It conducts research in all these fields and is also engaged in capacity building in all the said fields.

The head quarter of the organization is at Kolkata. It has a branch office in Maharashtra and also have representatives in the state headquarters of Assam, Bihar, Jharkhand and Rajasthan for coordination of projects taken up in those states. It is capable of taking up projects in any state of the country. The total income of the organization for the year 2017-18 was Rs. 54.96 Lakh.

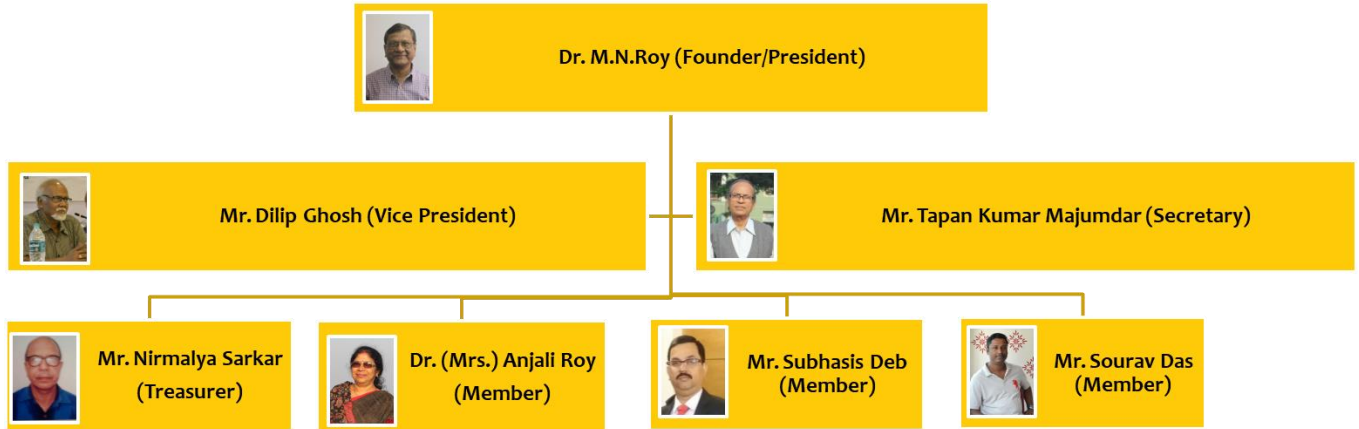
Mission

To provide possible support to all the tiers of government to be inclusive, effective and efficient for improving their performance and use their resources for enhancing human wellbeing and attaining sustainable development.

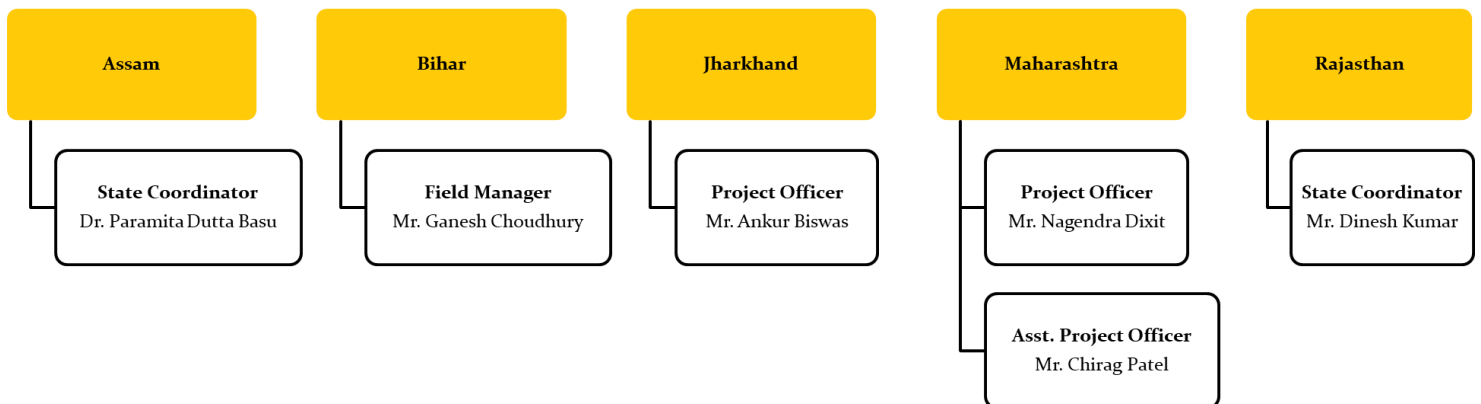
Vision

"Poverty free India with equity and justice, where each child can access opportunities to grow to his/her full potential, enjoy all the rights as citizen and be responsible for making the society better and sustainable."

BOARD MEMBERS...

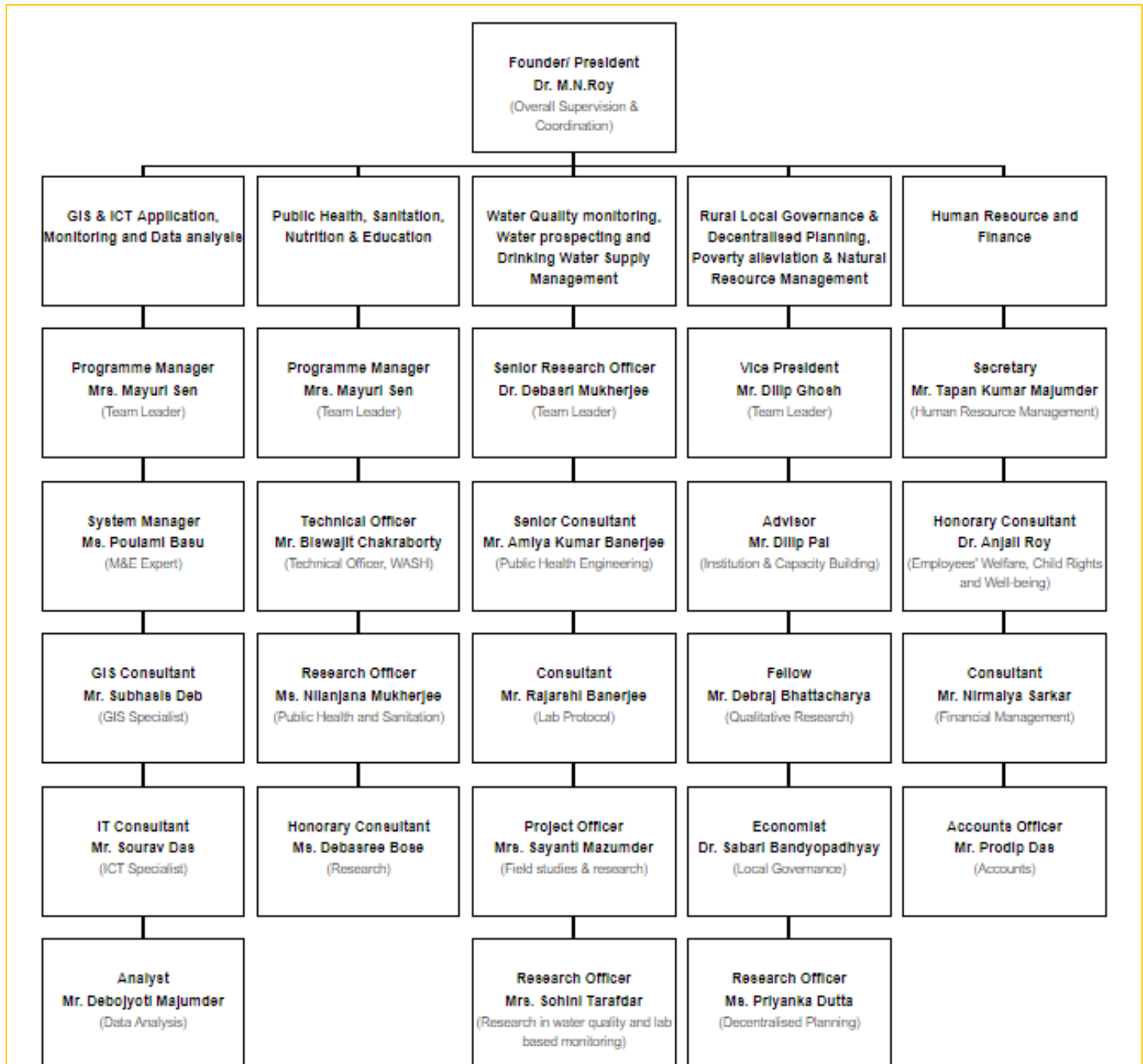


STATE REPRESENTATIVES...



THE CORE TEAM...

SIGMA Foundation is headed by Dr. M. N. Roy, who held key positions in the government during his career in the Indian Administrative Services spanning more than three decades. The organization has different developmental segments and surrounded by various scholars and experienced people. The organogram is given below:



MESSAGE FROM THE PRESIDENT...

SIGMA Foundation started its journey in the year 2014 to serve the society as a self-financed social enterprise with voluntary effort. It became a “not for profit” registered society in the year 2017 to widen its scope of work in providing consultancy services, to conduct socio-economic research and to partner with other organizations for serving the people in various disciplines of socio-economic and natural resources development. A committed team of multidisciplinary professionals with long experiences have since joined the Foundation. The core area of expertise of the organization is embedded in its name, i.e., ‘Providing Support for Improving Governance and Monitoring Advancement’. This covers disciplines like (i) Monitoring & Evaluation of various programmes and projects, (ii) Application of ICT including mobile telephony and GIS in real time monitoring, (iii) Big data analysis, (iv) Improving delivery of services in sanitation, public health, nutrition and education, (v) Improving management of drinking water supply & water quality monitoring, (vi) Ground water prospecting using remote sensing data for promoting water security, (vii) Improving governance, particularly at the local level, (viii) strengthening decentralization and participatory planning, (ix) Alleviation of poverty, promotion of livelihood and management of natural resources & environment etc. It is also very competent in building capacity, developing training materials and provide training in the said fields and providing IEC and BCC module preparation and monitoring support for various programme implementation. It has capability of taking up projects in the entire country as well as outside the country. So far, it has experience of working in states like Maharashtra, West Bengal, Rajasthan, Assam, Himachal, Bihar and Jharkhand.

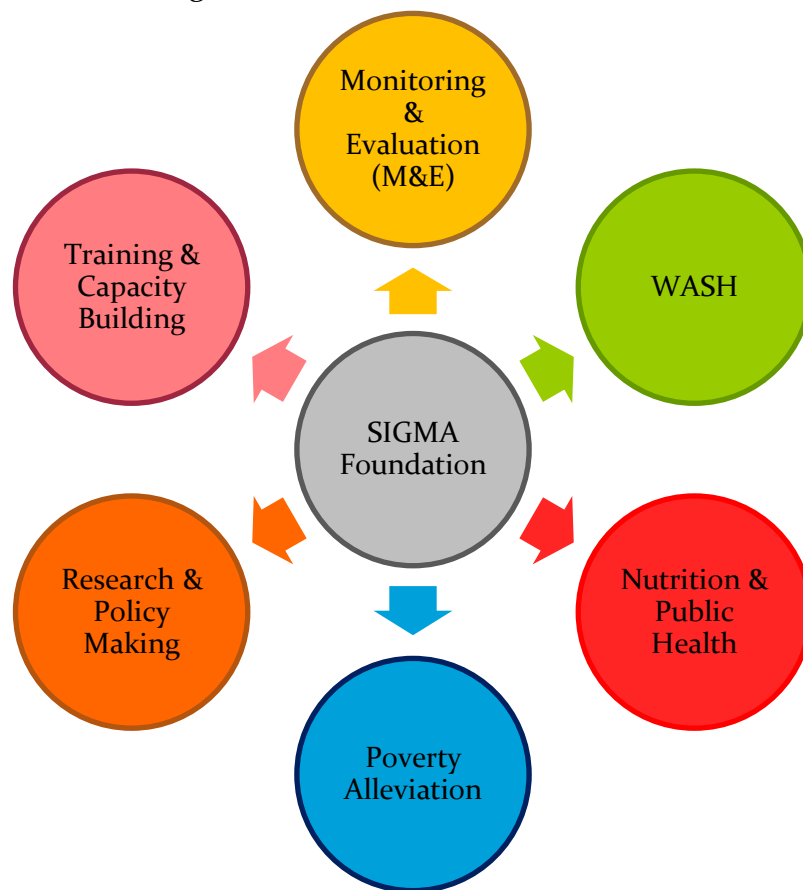


Dr. M. N. Roy
Founder/President

Being a knowledge-based organization, it puts utmost effort in continuous learning and adoption of advance technologies for remaining in the forefront of knowledge, capability and competitiveness. Providing best quality services to its clients/partners, which ranges from various state governments, UN organizations, public sector agencies as well as Non-Government Organizations is a commitment of the organization. Maintaining ethics and integrity in all dealings are the core values cherished by every member of the team and as a group we are fully committed to work for the betterment of the society and its sustainability.

OUR PROFICIENCIES...

SIGMA Foundation has acquired formidable skill in all the fields covering its major activities. It has been working for monitoring and analysis of data captured through MIS of several flagship programmes and the team has gained huge analytical skill for analysis of big data and generating feedbacks for the implementing agencies for identifying and pre-empting areas of failures. Such feedbacks have been very effective in making interventions for course correction. SIGMA Foundation has taken up several socio-economic researches and the experience has been very useful in taking up more such works requiring more advance analysis. It is engaged in study of local governance in some states, which has added to its understanding and analytical capability of local governance research. SIGMA Foundation has imparted training in all the field of its activities and the team is now more experienced and have better skill in training and capacity building in monitoring & evaluation, local governance, improving sustainability and safety of water and community-based management of water supply, implementation of sanitation programme and nutrition management.



WHY CLIENTS CHOOSE US...

SIGMA Foundation is a non-profit organisation which have expertise across various segments of work like monitoring and evaluation (M&E), WASH, Panchayat, Decentralised Planning and many more. The organisation always tries to maintain good relation with its clients. It delivers good quality work within the proposed time frame. Therefore, work quality, punctuality and moreover the overall support are the keys of choosing us by our clients. The services provided by us are as following:

Monitoring and Evaluation

Monitoring and Evaluation (M&E) of projects and programmes is one of the important services delivered by SIGMA Foundation. It is very capable of designing web-enabled system having GIS backbone where necessary for monitoring. Developing Android run mobile applications for capturing geo-tagged data from the field on real-time is another area of expertise of the organization. Dashboards are designed as a part of the web-enabled system to provide ready feedback as per programme requirement. Locational data captured through GIS where captured are integrated with the MIS to enable making spatial analysis. Assessment of status at baseline in the sectors like WASH, Nutrition, Processes of Local Governance, mid-term evaluation of any project for suggesting appropriate course correction and end-line evaluation at the end of the project are also carried out by the organization.

Data Analysis and Interpretation

The data management and analysis wing of the organization has long experience and proficiency in analysis of big data and helping the programme implementation authority for various decision support. The team has supported implementation of several national flagship programme like Swachh Bharat Mission (Grameen), Integrated Child Development Scheme etc. in the past. It also carries out disaggregated analysis of national/state wide programmes for bringing out performances across regions and over time for gaining better insight of the programme implementation and guidance for appropriate interventions for taking corrective measures.

Nutrition, Public Health and Sanitation

The team of SIGMA Foundation is well experienced in providing support to implementation of Swachh Bharat Mission. It has expertise in conducting field surveys, designing tools which can helps in making the ODF status sustainable and providing advice related to sanitation and Solid and Liquid Waste Management (SLWM). The team is also conversant in monitoring nutrition services and tracking nutrition status of individual child and other associated preventive healthcare measures, particularly those targeted towards women and children for improving public health.

Drinking Water Management and Water Safety

The team of experts of SIGMA Foundation handling drinking water supply including quality and sustainability issues has implemented several projects involving drinking water supply management and water quality monitoring system. The organisation has expertise in establishing

sound water quality monitoring system, monitoring management of water supply projects, aquifer mapping through latest remote sensing technology, developing website for water quality monitoring and interpretation of the data for guiding appropriate interventions. It has special expertise in establishing protocols for Good Lab Practice Models (GLPM) and putting in place required arrangement for NABL accreditation for chemical and bacteriological water quality assessment.

Improving Local Governance and Decentralized Planning

SIGMA Foundation has a very versed team for providing consultancy in strengthening governance, particularly at the local level, curriculum designing for training of local government functionaries, development of training materials, strengthening participatory planning process and application of PRA tools and related capacity building. The team members have wide experience in working with Panchayats and designing and supporting institutional strengthening measures across many states of the country. Computerization of the accounts, web-enabled system with GIS backbone for monitoring participatory planning & its outcome and development of grievance redressal system are the other areas of expertise of the team. The team is also experienced in taking up organization studies for improving governance and delivery of services.

Training and Capacity Building

SIGMA Foundation is also highly experienced in providing training in all the streams of activities in which it is engaged with. Training is provided using mostly participatory mode for enhancing learning outcome with the help of training materials like case studies, video clips etc. It has a small training facility in Kolkata office where training is conducted for smaller groups. For larger groups suitable training venue is hired for imparting training.

Poverty Alleviation and Management of Natural Resources

The team of SIGMA Foundation is well experienced in monitoring and evaluation of poverty alleviation programmes and livelihood development. The team has also expertise in management of natural resources for sustainable development and improving environment.

PROJECTS COMPLETED SO FAR...

Baseline survey on functioning of VWSCs and VHSNCs in Sagar and Patharpratima Block of South 24 Parganas –Client: Naihati ProLife

Starting date: 07.09.2017

Completion date: 30.09.2017

Prepare four modules on the role and responsibility of VWSC, VHSNC and Water User Committees - Client: Digambarpur Angikar

Starting date: 11.09.2017

Completion date: 30.09.2017

Improve the capacities of monitoring and evaluation officials for better appreciation of MIS data and monitoring & improving Drinking Water Quality in Assam – Partner: UNICEF, Assam State Office

Starting date: 30.11.2017

Completion date: 31.12.2017

Provide support in demonstrating a more effective Gram Panchayat Development Planning (GPDP) process in 12 Gram Panchayats of Tonk district– Client: Chief Planning Officer, Tonk

Starting date: 30.10.2017

Completion date: 10.02.2018

Baseline survey on functioning of VWSCs and VHSNCs in Sagar and Patharpratima Blocks of South 24 Parganas

Access to safe water and sanitation is critical for human development and is to be reached to every individual on a sustainable basis. These are important goals related to access to safe water under SDG (Goal 6.1) and India is committed for attaining the same. While there is need for putting in place appropriate policy and resources by the State and the Union government, there is also



VHSNC Members campaigning against stagnant water & emptying stored water

critical need for community actions in ensuring access to safe water and sanitation for all and forever. The local actions like installation of the drinking water facilities and their maintenance, sustenance of the services and developing appropriate attitude and practice by everyone have to be led by the Gram Panchayats, the rural local government in India. The community action is planned to be steered by the VWSCs (Village Water and Sanitation Committees) and the VHSNCs (Village Health Sanitation and Nutrition Committees), the former at the GP level and the latter at the Gram Sansad level, as have been prescribed by the government.



A Solid Waste Management Plant under construction at Digambarpur GP

Water for People, a reputed international NGO has been working for providing access to WASH services for ‘everyone and forever’ in Sagar and Patharpratima Blocks of West Bengal with their partners. As a part of the project and keeping in view to understand the future needs to be addressed in the coming country plan of ‘Water For People’, an international organisation supporting the initiatives in Patharpratima and

Sagar blocks with local partners, the status of functioning of the VWSCs and the VHSNCs were to be assessed. The work order was issued by Naihati Prolife, a partner organization of the Water For

People. The survey was completed on time and a report was submitted. The report also came out with important recommendations for strengthening the VWSCs and the VHSNCs.

Preparation of four modules on the role and responsibility of VWSC, VHSNC and Water User Committees

Water For People has been working for providing access to WASH services ‘for everyone and forever’ in Sagar and Patharpratima Blocks of West Bengal with their partners. The project aims at more involvement of the community for sustainable delivery of services in the WASH sector. As a part of their capacity building project they wanted to develop three training modules for training the members of the VWSCs, VHSNCs and the Water User Committees. A fourth module was to be developed for training of trainers. The work was assigned to SIGMA Foundation by Dimagambarpur Angikar, a partner organization of the Water For People. The Modules were prepared and submitted on time.



Improve the capacities of monitoring and evaluation officials for better appreciation of MIS data and monitoring & improving Drinking Water Quality in Assam

This was a partnership under SSFA (Small Scale Funding Agreement) with UNICEF Assam State Office. The project had two parts:

- The first part was to train the state and district level M&E officials of Assam on basic aspects of monitoring, techniques of analysis of data available in the IMIS of the MDWS and presentation of results for decision support. To improve understanding of the district/state MIS officials on different aspects of implementation of the Swachh Bharat Mission (Grameen), the training of the officials on Monitoring and Evaluation of Assam was arranged by SIGMA Foundation with support of UNICEF. The training included the basic understanding of various sanitation related factors which can promote the state along with



SIGMA Foundation helping the district officials of Assam in data analysis

the advocacy, IEC and IPC for triggering the community in changing behavior & attitude towards adopting sanitary practices and creating various aspects of implementation of SBM(G) and its progress in Assam, the gap to be bridged for making the state ODF by 2nd October 2019. The 2-days training included the basic concepts of Monitoring and Evaluation (M&E), understanding of sanitation and hygiene related aspects, implementation of SBM(G), generation of feedback for decision support in improving implementation of SBM(G) and regular follow up, concept of spatial monitoring, disaggregation of data and application of GIS, analysis of MIS data for monitoring SBM(G) and how to prepare Fact Sheets. Dr. M. N. Roy and other officials of SIGMA Foundation had trained the team on graphical representations of data and also explained the fundamental principles of monitoring in both

quantitative and qualitative term. Various ICT (Information and Communication Technology) tools for monitoring the performance under SBM (G) like spatial analysis, data management and disaggregated data analysis for generating information were discussed during the training sessions. It helped the officials to understand the implementation of the programme, disaggregated analyses, its visualization, decision support tools and feedback to the implementers based on analyses of the data. Dr. M. N. Roy sensitized the team on physical verification and how to make field visits more effective in judging quality of implementation of the programme including usage of toilet & sustainability of ODF, sanitary facilities and practices in the public domain (institutions and public places) and validation of data being uploaded under IMIS.

- The second part was to have a quick assessment of the existing Water Quality Monitoring System (WQMS) in Assam, status of functioning of the water testing laboratories and suggesting ways for improvement of WQMS in Assam. This was done by analyzing the IMIS data on water quality available in the website of the NDWS, interaction with the officials of the state head quarter, the officials of the state referral laboratory at Betkuchi, Guwahati and those at the district water testing laboratories and their supervising officials of the districts of Jorhat and Kamrup Rural. The State Referral Laboratory and the District Level Laboratories of Jorhat and Kamrup Rural districts were visited for that purpose by the study team and a brain storming session was organized with participation of professionals engaged in water quality testing from the entire state. A 'Report on Water Quality Monitoring System & Lab Practices in Assam' has been submitted to the Assam PHE Department and UNICEF Assam State Office. The report has recommended several steps to be taken for strengthening WQMS in Assam for consideration of the state Government.



Community level discussion with GP Pradhan at Pub Surusarai, Jorhat

Providing support in demonstrating a more effective Gram Panchayat Development Planning (GPDP) process in 12 Gram Panchayats of Tonk district

The project is a joint initiative of District Administration of Tonk, Rajasthan and UNICEF Rajasthan state office. The objective of the project was to develop models of preparation of Gram Panchayat Development Plan (GPDP) for the year 2018-19 in respect of two selected model GPs of the district with intense handholding by the experts of SIGMA Foundation and providing support for preparation of GPDP in other 10 GPs. The assignment also included developing the capacity of district trainers' team through that process.



Anganwadi worker identifying the problems in her center from the social map



Preparing natural resource map by the people of Rajpura GP of Tonk district

The project deliverables were:

- i. Re-orientation of a team comprising of 12 District Trainers Team (DTT) members, 8 GPCC (Gram Panchayat Planning and Coordination Committee) members of two model GPs and officials of DRCU to enhance their knowledge and facilitation skills for the preparation of quality GPDP
- ii. Demonstration of effective GPDP through two-day field work and two-day write-shop followed by facilitation of Special Gram Sabha in 2 GPs
- iii. Delivery of complete GPDP document of two models GP through demonstrating the GPDP process consistent with the State Government Guidelines.
- iv. Handholding/ Monitoring Support in the remaining 10 model GPs
- v. Documentation of the entire process



Preparing natural resource map by the people of Chandsen GP of Tonk district

PROJECTS IN PROGRESS...

1. Time and Work study of Gram Panchayats – Partner: National Institute of Rural Development and Panchayati Raj (NIRD&PR)

Starting date: 14.12.2017

2. Developing capacity towards concurrent monitoring and supportive handholding to Govt. of Maharashtra to sustain ODF status of rural Maharashtra with identification of bottlenecks and developing enabling environment – Partner: UNICEF, Maharashtra

Starting date: 15.02.2018

3. Assessment of Management Practice and Functioning of the Rural Piped Water Supply Schemes Maintained by GP/VWSCs as well as PHED in the District of Nadia & Hooghly of West Bengal – Client: PHED, West Bengal

Starting date: 07.03.2018

4. Collecting Baseline Information, Conducting Post-Implementation Monitoring and water sample collection for water quality testing in Sheohar district (Bihar) & Sagar and Patharpratima Blocks of South 24 Parganas – Client: Water For People

Starting date: 14.03.2018

5. Strengthening Functioning of Assam PHED and Water Quality Monitoring System of Assam – Partner: WSSO, Assam

Starting date: 15.03.2018



Time and Work study of Gram Panchayats

National Institute of Rural Development and Panchayati Raj (NIRDPR) took up a project of assessing the workload of the GPs across the country to find out the types of human resource requirement for the GPs in different states. This has to be achieved by conducting “Time and Work study of Gram Panchayats” in some GPs selected from each state, based on certain criteria by the NIRD&PR.

The data has to be collected as per the following Schedules developed by the NIRD&PR

- i. Schedule 1: State Information Schedule
- ii. Schedule 2: Schedule on Gram Panchayat Profile
- iii. Schedule 3: GP function profile
- iv. Schedule 4: Process Mapping of Gram Panchayat Functions



Training of surveyors for time and work study in GPs at ICMARD, Ultadanga



Discussion with SHGs during field work in Ajodhya GP of Purulia during Time and Work Study supported by NIRD&PR

- v. Schedule 5: GP Functionaries Schedule
- vi. Schedule 6: Time and Work Observation Worksheet
- vii. Schedule 7:
 - ❖ Focus Group Discussion (FGD) with GP Employees
 - ❖ FGD with elected representatives of the GP
 - ❖ FGD with NGOs and other institutions working with PRIs in the State and
 - ❖ 3-4 FGDs with citizens, one of them being a SHG
 - ❖ The data collection is to be followed by analysis of the data and preparation of state

specific reports. SIGMA Foundation was given the responsibility of preparation of reports followed by field survey in West Bengal and Himachal Pradesh as partner of NIRD&PR. The study was in progress as on 31st March 2018.

Developing capacity towards concurrent monitoring and supportive handholding to Govt. of Maharashtra to sustain ODF status of rural Maharashtra with identification of bottlenecks and developing enabling environment

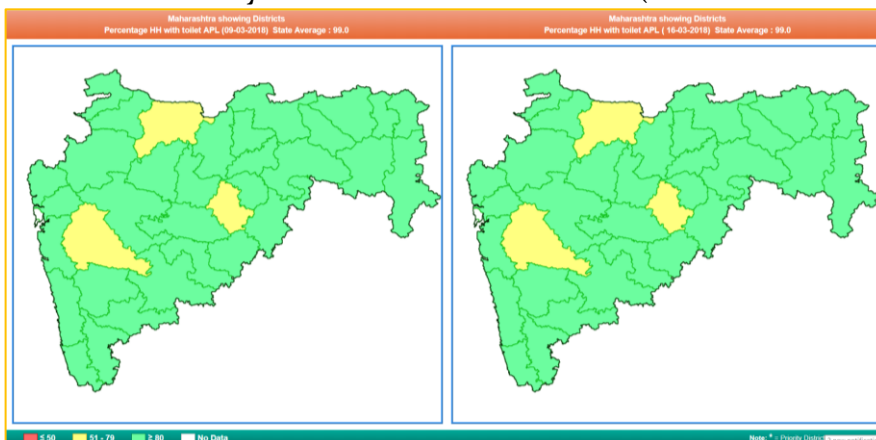
SIGMA Foundation has started supporting the government of Maharashtra in the field of WASH.

The support includes monitoring of the progress of SBM(G) through rapid field surveys with special focus on use of toilets and change in sanitary and hygiene behaviour as well as critically looking into the issues of ODF sustainability with improvement of public health indicators. The project area covers 12 districts and 18 Census Towns of Maharashtra. All the districts of Aurangabad Division and the districts of Chandrapur, Palghar, Nandurbar and Amravati are included for conducting regular field visit and collection of both household level and GP level data and to analyse those for giving feedback to the Zilla Parishads well as the state authorities, ie., the WSSO and Water Supply and Sanitation Department of the Government of Maharashtra. Each district will be visited once in a quarter and two GPs and 10 to 15 HHs in each GP will be visited at random to assess ground realities. 20 out of those 39 Census Towns of the districts covered under the project will also be surveyed regularly to understand the problem of sanitation and waste management in the non-municipal towns. The data captured will also be analysed to gain knowledge about the issues of sanitation in such areas and suggesting possible measures in overcoming those problems. The field visit will also observe the IEC activities being performed at the block and GPs and its impact on ODF sustainability in order to motivate the families for constructing and using the IHHLs. Visits to a few schools, ICDS centres, health sub-centres and PHCs will be made and the feedback report will be shared with the implementing agency.

A web-enabled system with GIS backbone (hosted at mh.swachhgaon.in/watsan) has been



Toilet constructed at Ashagad GP of Dahanu Taluka, Palghar District



developed to guide the field officials by displaying the analyzed result on status of sanitation across all the blocks of the state for planning appropriate interventions by respective authorities of the state. The main motive of the initiative is to help all the officials up to

block level to go through the web-based analysis on a regular interval, know their performances

in comparison to others, internalize the reasons behind any shortfall and to plan for taking specific actions for improving performances.

Assessment of Management Practice and Functioning of the Rural Piped Water Supply Schemes Maintained by GP/VWSCs as well as PHED in Nadia and Hooghly Districts of West Bengal

Safe water is very important for public health as well as for economic growth of a country. The Goal 6.1 of the Sustainable Development Goals (SDG) is “universal and equitable access to safe and affordable drinking water for all by 2030”.

Public Health Engineering Department (PHED) is traditionally responsible for installation and maintenance of the rural Piped Water Supply Schemes (PWSS). After the 73rd Amendment of the Constitution and gradual empowerment of the Panchayats, the State government had been considering to hand over the responsibility of O&M of the PWSSs to the Panchayati Raj Institutions (PRIs) or Gram Panchayats (GPs) which was so far responsible for installation and management of Tube Wells (TWs) only. In the year 2013 Ministry of Drinking Water & Sanitation (MDWS), GOI, has initiated the decentralization process of drinking water supply through PRIs and community involvement to ensure active participation of the villagers, which will ensure the drinking water security as well. This process has to be done in Mission mode by involving the



SIGMA Officials in discussion with GP Pradhan, Executive Assistant and other Sahayak



Dr. M. N. Roy talking with the valve operator of Gurap GP, Dhaniakhali, Hooghly

community to achieve the goal. For this purpose, GoI has directed all the States to constitute one VWSCs in each GP to function for promotion of water and sanitation, which has to function under general guidance and control of the GP concerned. Hence, Government of West Bengal has decided to hand over the responsibility of management, operation and maintenance of all the Piped Water Supply Schemes (PWSS) from PHED to Gram Panchayats/Village Water and Sanitation Committee (GPWSC/VWSC). This process of transfer of PWSS from PHED to GPs/VWSCs has been started from 2015 and still it is going on in different parts of West Bengal as well as in India. Since almost two years have been passed after such hand over process was started and more schemes are likely to be handed over in future, it has been felt necessary to assess the status of functioning of the handed over schemes as well as the how those are being

maintained and operated. A study for assessing the status of functioning of the PWSS handed over to the VWSCs compared to which are being operated by the PHED of was assigned to SIGMA Foundation through competitive bidding. The objective of the study was to find out if any impediment exists within the water supply system at the village level and also to suggest appropriate measures to improve the performance of VWSCs if needed.

Collecting Baseline Information, Conducting Post-Implementation Monitoring and water sample collection for water quality testing in Sheohar district (Bihar) & Sagar and Patharpratima Blocks of South 24 Parganas (West Bengal)

The study is categorized into three parts. The first part captures the current drinking water and WASH Scenario in Sheohar district of Bihar. Secondly, impact of the investment of ‘Charity Water’ is being studied by post-implementation monitoring of the installed water points in Sheohar as well as Sagar and Patharpratima blocks of West Bengal. Thirdly, water samples are being collected and sent for test of water quality parameters. The results of this study will be primarily used by Water for People and Sigma Foundation for the following purposes:

- Clear understanding of the present scenario of drinking water in Sheohar district of Bihar. The inference will be directly based on the user’s feedback regarding their satisfaction with the water point they use, need of the type of source which is required to be installed with the support of ‘Charity Water’. A picture of water accessibility and WASH infrastructure and facilities will also be drawn from the study.



Water testing in Sagar and Patharpratima blocks of South 24 Parganas

- Assessment of the impact of the work already done by ‘Charity Water’. The functionality of the water points and user’s perception regarding the same will help WFP to prepare a detailed analysis of the impact of their project implementation and the scope of improvement if required. The present condition of WASH at household and school levels will also be understood in the post implementation phase.
- Water Quality test of water samples will provide the real time primary data which will be used for data comparison, post interventions and external circulation.

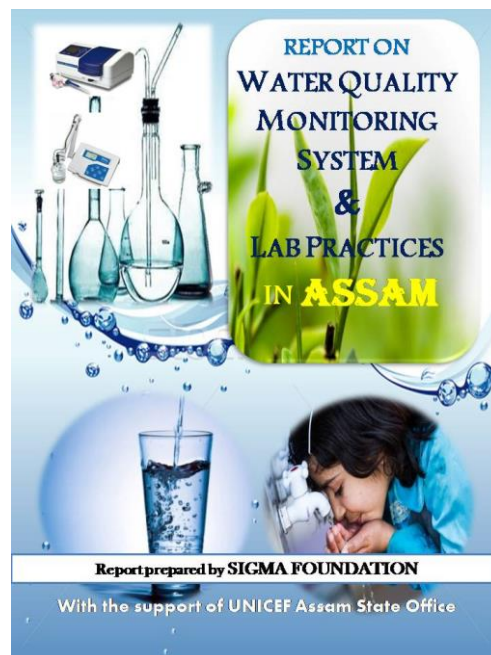


SIGMA Foundation officials with Water For People, New York, WFP, India, enumerators and supervisors of IKONET

A 3-days "Orientation programme on water quality monitoring and baseline survey by Water For People (WFP), New York, Charity Water-Denver and WFP, India with the technical supervision of SIGMA, Foundation.

Strengthening Functioning of APHED and Water Quality Monitoring System of Assam

The Government of Assam is keen to improve the performance of the PHE Department of the state to meet the challenge related to water supply, keeping the SDG (Goal 6.1) in mind. The state government approached UNICEF Assam for support and the latter identified SIGMA Foundation to take up a diagnostic study for Assam PHED. The other area in which the state requested support of UNICEF is water quality monitoring since the state faces serious problem of water quality. Drinking water in some areas of Assam is not safe as per the set standard under the BIS and water quality has emerged as a major problem in the State. 21 out of 27 districts of the state are already known to have problems of Arsenic or Fluoride contamination or both. WSSO Assam entered in to a MOU with SIGMA Foundation for taking up the following two activities:



Activity 1: Diagnostic Study of APHED for strengthening its functioning

To assess and examine the system of implementation of drinking water supply by the APHED in terms of ongoing and proposed project and related capacity. To identify the constraints in functioning of the PHE Department, particularly in implementation of NRDWP and utilization

of funds available under related schemes and to suggest steps to be taken for improving functioning of the department.

Activity 2: To develop a sound Water Quality Monitoring System (WQMS)

- i. To conduct a Refresher Training Program for the lab personnel of 27 DLLs and 1 SRL of Assam. The training is to be conducted in two batches in residential mode at the SRL with due emphasis on hands on training at the laboratory.
- ii. The SRL, Betkuchi will be assisted for NABL accreditation for critical water quality parameters such as Arsenic and Fluoride. The Technical Specification and the recommended protocol will be provided to SRL for the accreditation.
- iii. Orientation of the personnel in six selected DLLs including Jorhat DLL for adoption of GLPM &MF with the ultimate objective of enabling the Jorhat lab to be able to apply for NABL accreditation by the end of December 2018 (to be achieved in the second phase). Training on sanitary survey for the quality affected districts to protect the source contamination during the project period. They will also be trained on Membrane Filtration technology, if facilities are put in place by the time their training is taken up.

CONTRIBUTION OF SIGMA FOUNDATION FOR THE WELLNESS OF THE SOCIETY...

- **SIGMA Foundation and SOS Children's Village, Kolkata celebrate World Water Day, 2018:** SIGMA Foundation, Kolkata and SOSCV, Kolkata had taken an initiative to celebrate World Water Day, 2018 in the campus of SOS Children's Village, Kolkata on 31st March, 2018. A One Day Orientation Program on **"Educating Children on WASH where Every Drop Counts"** had been organised where awareness regarding sustainable use of water was spread among the SOS children through behavioural change with the application of IEC tools. It was induced in the innocent brains of SOS children through various interactive activities and audio-visual clippings by SIGMA expert group. Mrs. Kamala Saha, Deputy Director, Child Trafficking Department, West Bengal and Ms. Dipali Sarkar, Secretary SOSCV, Kolkata had graced the occasion as special guests of the event. Dr. M. N. Roy, Founder and President of SIGMA Foundation enlightened the children on Water with his special thoughts. Mr. A.K Ray, Local Board President, SOSCV, Kolkata and Mr. Sailesh Singh, Zonal Director, SOSCV, East India had put forward the thought for the need of such awareness campaign. The technical team of SIGMA Foundation was led by Dr. Debasri Mukherjee, Senior Research Officer who gave a talk on "Overall WATER Scenario" with facts and figures of the country leading to a dangerous water stressed zone which needs immediate attention and action. Water samples from SOSCV FSP sites namely Rohanda, Narayanpur, Rajarhat etc. were tested for water quality parameters in front of the children and house members. The specific demonstration using the Field Test Kit was given by Mr. Rajarshi Bannerjee, Consultant SIGMA Foundation. Mrs. Deboleena Bhattacharya, IEC and BCC Expert from SIGMA Foundation who is also a TV anchor in Doordarshan West Bengal taught the children six steps of handwashing and handling safe water through various games and activities. Ms. Priyanka Dutta and Ms. Nilanjana Mukherjee also shared a brief overview on Panchayat and Sanitation with the children. The entire program was conducted and compared by Mrs. Sohini Tarafdar, Research Officer, SIGMA Foundation who had also engaged the students in a brief interactive session on personal hygiene. The programme wrapped up with an exciting "WATER" theme-based poster competition with the kids of SOS Children's Village Kolkata and the winners were



Dr. M.N. Roy and Mr. Sailesh Singh, Zonal Director, SOS CV, East India watering the Tulsi sapling as an inaugural gesture of the event

given champion trophies by Dr. Sanjeev Kumar Singh, Director SOSCV, Kolkata, Dr. M.N. Roy and Dr. Anjali Roy, Honorary Consultant, SIGMA Foundation who is also a Teacher in



Officials of SIGMA Foundation delivering their views on WASH during World Water Day, 2018 Pradeep Centre for Autism Management, Kolkata. Jointly vote of thanks was offered by Dr. Sanjeev Kumar Singh and Mr. Debmalya Biswas Chowdhury, Assistant Director, SOSCV, Kolkata. The entire team of SIGMA Foundation had come forward for the event of “Charity for Science”.

- Media Coverage: The WWD, 2018 event covered by *Laban Hrad Sanbad & Sanbad Prabaho*



- SIGMA Foundation, as a partner of UNICEF Assam Field Office, has contributed Rs. 62,000/- for improving the capacities of the monitoring and evaluation officials for better appreciation of MIS data and monitoring and improving the drinking water quality in Assam.

PARTICIPATION OF SIGMA FOUNDATION IN DIFFERENT EVENTS...

- A conference on “**Water, Sanitation and Hygiene for All – Sustainability Issues Under Rural Indian Conditions**” was organized by the Rural Development Forum of the Institution of Engineers in collaboration with IEST, Shibpur on the 17th March 2018. Dr M.N.Roy, President SIGMA Foundation delivered the Key Note Address. The entire programme was technically conducted by Dr Debasri Mukherjee Senior Research Officer of SIGMA Foundation and Er. Sohini Chatterjee Research Officer of SIGMA Foundation also



Dr. M.N.Roy was invited as a Special Guest & Keynote Lecturer in a conference on WASH at IEST, Shibpur



Dr. Debasri Mukherjee comparing the entire technical session in IEST, Shibpur

attended the conference.

- SIGMA Foundation was requested to attend a seminar on ‘**Water Safety & Security Plan**’ held at Golaghat district of Assam. Dr. M. N. Roy and Dr. Debasri Mukherjee Senior Research Officer of Assam attended the seminar and made important contribution.
- Dr. M. N. Roy was invited by the Government of Jharkhand to make a presentation at the State Consultation on Jharkhand ODF Sustainability Strategy Ranchi on 27th February 2018.
- Ministry of Rural Development Department, GOI constituted a Standing Committee; to look into improvement of human resources in States/UTs for better outcomes of programmes’ vide Order No. J-11020/02/2017-SAGY/PPM dated the 6th February 2018. Dr. M. N. Roy was made a Member of the Committee.



President, SIGMA Foundation with PHED Team at Golaghat, Assam

PUBLICATIONS BY THE TEAM MEMBERS...

- A book on “**Governance and Governed**” edited by Prof. Madhushri Sekhar, Prof S. Parashuraman both of TISS Mumbai and Ruth Kattumuri of London School of Economics was published by Springer during the year and it included a paper ‘Electronic Technology and the Changing Dynamism of Governance’ by Dr. M. N. Roy.
- Based on fieldwork in four states of India and reading of secondary literature, an article was published in April 2017 by Mr. Debraj Bhattacharya (Fellow, SIGMA Foundation) in the context of Women Political Empowerment Day (April 24) titled 'Women Empowerment: Does Patriarchy Fear Reservation in Gram Panchayats' in WION, 24 April (<http://www.wionews.com/south-asia/women-empowerment-does-patriarchy-fear-reservation-in-gram-panchayats-14841>). The article raises the question - is the reservation policy able to break the stranglehold of patriarchy in rural India? While no conclusive argument can be made, the article advocates for a large-scale study across the country to determine how far the policy is effective.
- Dr. Sabari Bandyopadhyay (Economist, SIGMA Foundation) presented a paper entitled Migration from Other Countries to the Seven Sister States of North Eastern Region of India: Trend and Consequences at International Seminar on Internal Changes in South Asia: Challenges and Opportunities, organised by Centre for International Relations School of Humanities and Social Sciences, Central University of Jharkhand, Ranchi, Co-sponsored by Indian Council of World Affairs, New Delhi, April, 20-21, 2017.
- Dr. Sabari Bandyopadhyay has edited one book “Combating Corruption, Black Money and Money Laundering: Issues and Challenges Ahead” with Prof. (Dr.) B. C. Nirmal, published by Satyam Law International, New Delhi. Also, a paper by Dr. Sabari Bandyopadhyay entitled Migration from Other Countries to the Seven Sister States of North Eastern Region of India: Trend and Consequences was published in a book Internal Changes in South Asia: Challenges and Opportunities edited by Dr. Bibhuti Biswas, published by Indu Book Services, New Delhi.
- On 30th March, one day meeting was organized with Water For People Denver-USA Team and SIGMA Foundation in Delhi on 'West Bengal Strategy Plan on Water, Sanitation and Hygiene'. In this connection, a detail presentation was shared by Dr. M. N. Roy where he clearly focused on (a) source sustainability, (b) operation & Maintenance (O&M) and (c) decentralization of planning, operation and maintenance in context of WASH. Dr. Roy, also added that where Water For People can join hands with the Government action Plan in future.



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