

# ANNUAL REPORT

## 2021-22



A YEAR IN REVIEW

## WELCOME TO SIGMA FOUNDATION

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 with the initiative of Dr. M. N. Roy, the Founder-President of the organisation. Keeping that in mind, the organisation takes up several activities for improving governance towards enhancing both efficiency and effectiveness of the service delivery towards the poor and vulnerable sections of the society.

This organization has specialization in carrying out assignments on varied issues related to social and economic development. Its area of expertise includes Monitoring & Evaluation of various projects in the field of socioeconomic development, particularly Child Rights and Protection, Public Health and Nutrition, Education; Water Supply, Sanitation & Hygiene (WASH) including Water Quality Management and Water Conservation, Climate Change and Environment Management, Disaster Management and so on. Moreover, SIGMA Foundation too has proven its excellent proficiency in (i) Rural Governance, Decentralize Planning and Poverty Alleviation, (ii) Urban Development, particularly in the sphere of Solid & Liquid Waste Management, (iii) Application of Geographic Information System (GIS) and Satellite Data in designing & developing system, for Real Time Monitoring, and development of IOS/Android application and web-applications for monitoring and evaluation and (iv) Analyses of big data generated through program MIS and its interpretation for decision support. We also take up research and provide consultancy services for implementation of projects in all the said sectors.

The head quarter of the organization is at Kolkata. It has a branch office at Aurangabad in Maharashtra and also have representatives at Delhi and Patna for coordination of our activities in those and nearby states. It is capable of taking up projects in any state of the country. The organization has the experience of working in 19 states of the country namely Assam, Bihar, Andhra Pradesh, Chhattisgarh, Delhi, Gujarat, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.

### VISION & MISSION STATEMENTS

#### OUR VISION

To be one of the most competent organisations in the country for providing Monitoring & Evaluation and Consultancy services and implementation of projects in the field of socio-economic development, public service delivery and strengthening governance.

#### OUR MISSION

To sustain learning of the team for improving competence in providing best services to our partners/ clients by maintaining quality, timeliness, cost efficiency and innovations in approach.

## DR. M. N. ROY



The year 2021-22 was also pandemic-hit like the previous year and we had to face several challenges in continuing our work. However, SIGMA Foundation had a reasonably good performance during the year 2021-22 and could add more new partners like Azim Premji University, Catholic Relief Services, Kailash Satyarthi Children's Foundation, Aga Khan Foundation, Oxfam and Hoffnungszeichen | Sign of Hope e.V. SIGMA Foundation also started supporting the Government of Maharashtra as the Independent Support Agency (ISA) for implementing Jal Jeevan Mission in Aurangabad district of Maharashtra. The number of states where we worked has also increased substantially by covering almost all the major states. We are longing to put our footprint in the remaining states of the country and wish the lessons learnt during the difficult period due to the pandemic will help us to overcome any challenge in the coming years.

SIGMA Foundation has substantially improved its presence in the field of child right and child protection and early childhood education. New thematic areas like research on issues related to climate change has been a new addition and this will be another area to be put emphasis in future. I am also happy to note that 7 research papers have been published by our team members in peer reviewed journals.

Dr. M. N. Roy



# OUR BOARD OF DIRECTORS

## FOUNDER-PRESIDENT

Dr. M. N. Roy did his M.Tech from University of Calcutta and PhD in Social Science from Tata Institute of Social Sciences and studied Sustainable Development in the University of Birmingham, UK. He joined the Indian Administrative Service in 1980 and retired from the same as Additional Chief Secretary of the Govt. of West Bengal in the year 2012. He was President of Riddhi Foundation after retirement till February 2018 and is the Founder and President of SIGMA Foundation from 2014. He is a member of the Institution of Engineers India, Indian Statistical Institute, International Water Association and the Indian Science Congress Association.



## VICE-PRESIDENT

A former member of the Indian Administrative Service, Mr. Dilip Ghosh worked mostly in the areas of Health, Nutrition and Child Development and Rural Decentralisation. He retired as Secretary to the Government of West Bengal. He headed a number of Government and external agency-supported projects on decentralization and rural livelihood implemented by the Government of West Bengal. He was a member of the Fifth State Finance Commission of West Bengal after his retirement from service in 2012. He has been an honorary adviser to Viswa Bharati University and Rabindra Bharati University.



## SECRETARY

Mr. Tapan Kumar Majumdar is also a retired IAS officer and he retired as Joint Secretary of the Government of West Bengal. He has a long experience of working in District Administration besides overseeing the performance of important flagship programmes of the Public Health Engineering Department and the Panchayat & Rural Development Department of the Government of West Bengal.



## TREASURER

Mr. Nirmalya Sarkar is an FCA and has served Government of West Bengal for 34 years in West Bengal Audit & Accounts Service. He has wide experience in Project/Programme Fund Monitoring & Accounting and accounting of Panchayat Bodies.



## OTHER BOARD MEMBERS



Dr. Urmila Ukil



Dr. Anjali Roy



Ms Evelyn Banerjee

# OUR TEAM

SIGMA Foundation is led by Dr. M. N. Roy, who has a background in Electronics & Telecommunication as well as in social science research. He held key positions in the government during his career in the Indian Administrative Services spanning more than three decades. He is assisted by a few other retired IAS and State Civil Service Officers and professionals from various disciplines. The team consists of professionals from diverse backgrounds (Economics, Sociology, Anthropology, Public Health and Nutrition, Education, Population Science, Geography, Geology, Development Studies, Environment Science, Environment Engineering, Civil Engineering, Chemical Engineering, Management, Finance and Statistics) having various skillset who are well equipped and experienced in conducting socio- economic research. The vision of the organization resonates with every team member and they motivate and inspire each other to do their best. One of our greatest strengths is our team spirit as we unite every day in doing our best to bridge the gaps in program implementation through technology driven tools in order to provide our clients with the best results.

## OUR ADMINISTRATIVE & PROGRAMME MANAGEMENT TEAM



Dr. M. N. Roy,  
President



Sutanu Prasad Kar,  
Director, Project



Mayuri Sen, Programme  
Manager



Anjan Sarkar,  
Programme Manager

## OUR TEAM LEADS

WASH and  
Climate



Dr. Debasri  
Mukherjee, Senior  
Research Officer

Panchayat & Rural  
Development



Dr. Sabari  
Bandyopadhyay,  
Economist

Capacity Building &  
Data Management



Sangram Mukherjee,  
Senior Project Officer

Socio-Economic  
Research



Dr. Sanghamitra  
Kanjilal-Bhaduri,  
Senior Research  
Officer

Environment &  
Waste Management



Sonia Nandi,  
Technical Officer

## OUR RESEARCH/PROJECT IMPLEMENTATION TEAM



Er. Sohini  
Chatterjee,  
Research Officer



Nagendra B.  
Dixit, Project  
Officer



Debojyoti  
Majumder, M&E  
Officer



Imtiyaz Ahmed,  
Project Officer



Riyanka Ghosh,  
Data Analyst



Subhalina Dasgupta,  
Research Officer



Saptadip Chakraborty,  
Project Officer



Dr. Tanusree Dutta,  
Research Officer



Soumyadeep Das,  
Environment Officer



Dr. Sayantani  
Chatterjee, Research  
Officer



Payel Banerjee,  
Research Officer



Ritaban Mitra,  
Project Officer



Pithona Das,  
Project Officer



Arundhati Roy,  
Consultant



Dr. Satarupa  
Dutta, Consultant

OUR TEAM

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# OUR TEAM

## OUR FINANCE MANAGEMENT TEAM



Prodip Das,  
Accounts Officer



Supriya Banerjee,  
Accountant

## IT SUPPORT



Sourav Das, IT  
Consultant

## OUR FIELD TEAM



Ganesh  
Choudhary



Aslam Ali



Kabirul Islam



Rubam Mondal



Swarup Nag



Bishal Pramanik



Raiesh Kumar



Nikalje  
Digambar

## OFFICE SUPPORT



Siddqui Md. Kashif



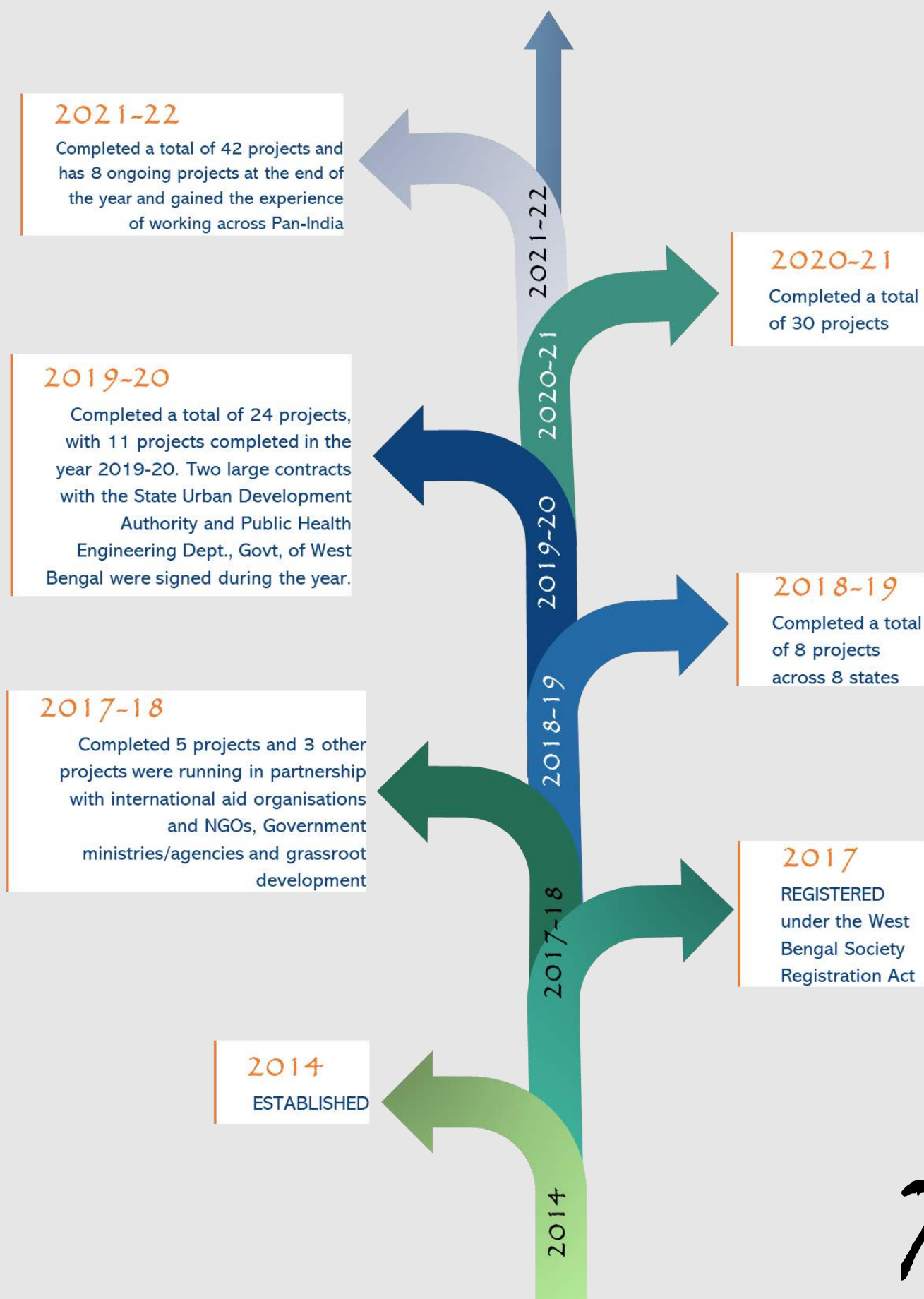
Sourav Dutta



Jagadish Mondal

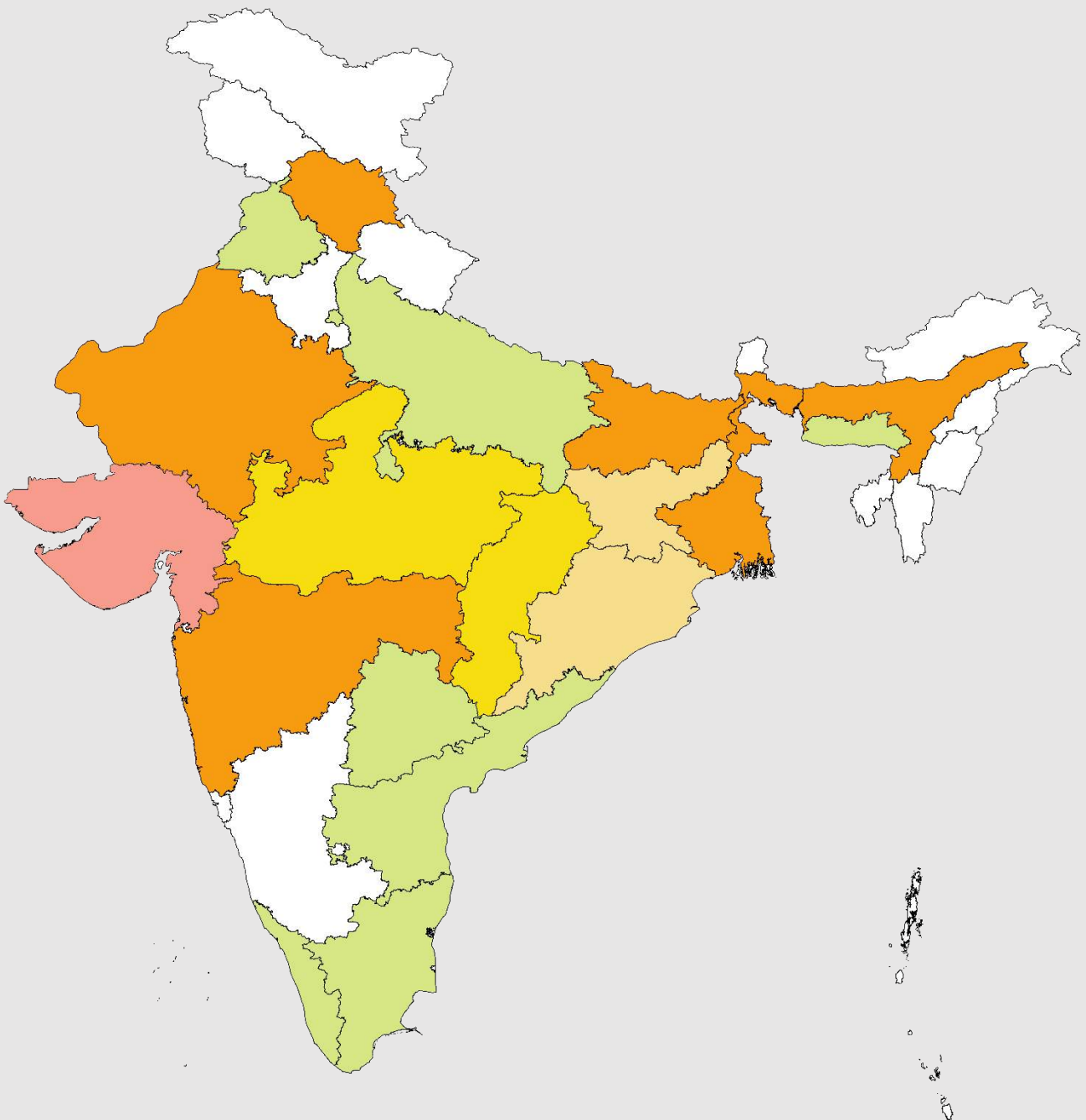
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# OUR JOURNEY SO FAR





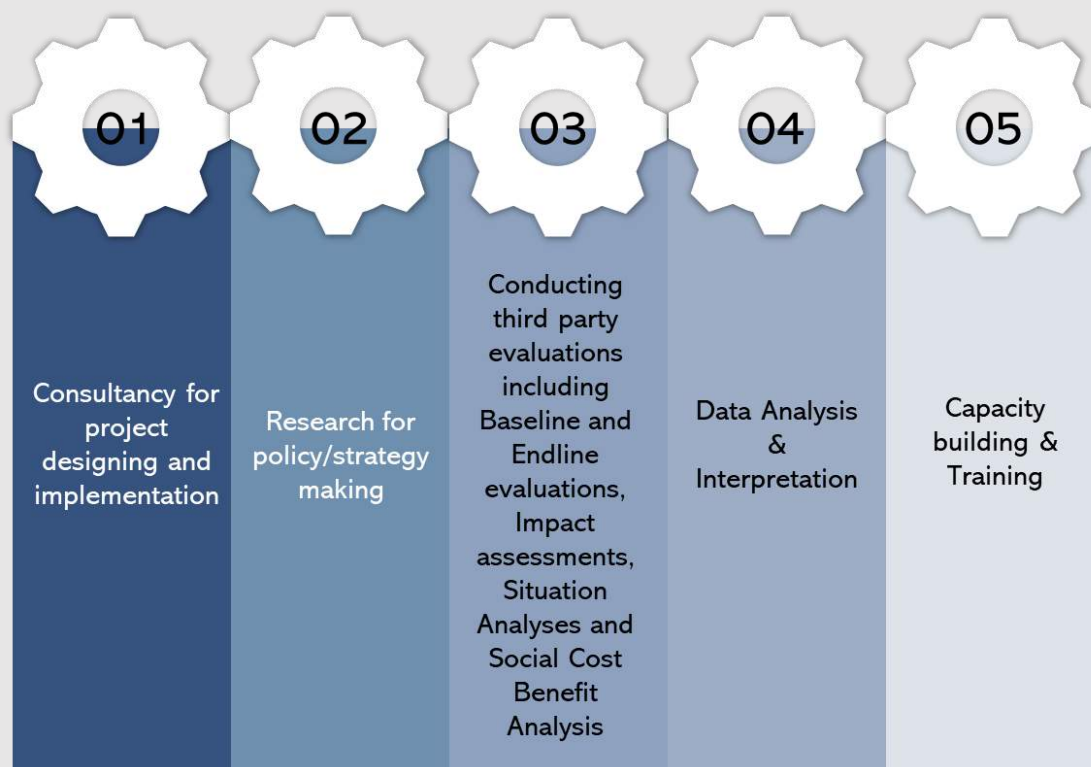
# OUR FOOTPRINTS



Year-wise footprints					
Legend					
FY	2017-18	2018-19	2019-20	2020-21	2021-22
New states	6	2	1	2	8

# OUR SKILLS AND SERVICES

SIGMA Foundation has acquired formidable skill in all the fields covering its major activities during the year. SIGMA Foundation has taken up several socio-economic researches and the experience has been extremely useful in taking up such works requiring more advance analysis. It has conducted the first ever large-scale study on child trafficking in India covering 16 states and has gained much deeper insights in issues of child rights. It has also strengthened its portfolio in the field of public health, early childhood education and development of the adolescents. It is engaged in study of local governance and decentralized planning in Rajasthan and Maharashtra, which has added to its understanding and analytical capability of local governance research and decentralized planning. It also received its first ever grant from Azim Premji University for conducting research on the unique system of Gram Kachahari in Bihar which has strengthened the team working on local governance and democratic decentralization. SIGMA Foundation has also gained exhaustive experience in the WASH sector in particularly extending support for rolling out Jal Jeevan Mission in the state of West Bengal, developing some of the policy guidelines and developing models for village level planning for universal coverage through tap water connection and planning for water security at the Gram panchayat level. It has entered new areas of research on climate change and its impact on the society, adaptation for climate change and groundwater monitoring and analysis. Further, it has enhanced its skill on urban waste processing during the year. SIGMA Foundation has imparted training in all the field of its activities and the team is now more experienced and has developed better skill in training and capacity building in monitoring & evaluation, local governance, decentralized planning, improving sustainability and safety of water and community-based management of water supply, implementation of sanitation programme and nutrition management.



**Consultancy for project designing and implementation:** We have a team of engineers covering civil, environmental, chemical and electronics and other professionals with capability if designing projects, preparing DPRs and implementation of projects. So far, we have done such works in the field of WASH including solid waste management, water and sanitation safety, rain water harvesting and

ground water recharging. We have installed innovative pedal operated handwashing stations in several block offices of the state. We have also facilitated implementation of national flagship programmes like Jal Jeevan Mission, externally aided drinking water supply project and the Swachh Bharat Mission.

**Research for policy/strategy making:** SIGMA Foundation has an experienced team of inhouse experts covering various branches of social science, earth science, bioscience, engineering, finance and other specialized disciplines. This helps to analyse the issues to be addressed from all the relevant aspects. We have supported clients in developing policies related to improving organizational efficiency (of a state government department) for better implementation of programmes, Operation & Maintenance (O&M) of water supply system, institutional strengthening of Panchayats, decentralized planning, child protection, public health and knowledge management. These assignments involved extensive research to assess the problems to be addressed, local context and the challenges to be overcome – both internal and external for the organization through appropriate policy formulation and development of strategy for implementing policy.

**Conducting third party evaluations including Baseline and Endline evaluations, Impact assessments, Situation Analyses and Social Cost Benefit Analysis:** SIGMA Foundation has gained good competence in carrying out various types of evaluations such as (i) endline evaluation of programme interventions to assess the outputs, outcome and impact as well as reporting comparative status from the baseline as per log frame indicators, (ii) research for working out and validate 'Theory of Change' and logical framework for optimum resource provisioning in designing projects, (iii) baseline study to assess the situation before programme intervention and formulating indicators for monitoring progress, (iv) situation analysis to help various decision support for course correction in programme design/management and (v) social cost benefit analysis. The team is well versed with techniques of quantitative and qualitative research and use appropriate statistical tools for data analysis. It has its own protocol for ensuring timely completion of assignments, quality control as well as maintaining ethical standards in field research. It is also conversant in using digital tools for data capturing, supervision and quality control.

**Data Analysis & Interpretation:** Monitoring & Evaluation related activities of the organization is its core strength. It has good competence in conducting baseline & endline evaluation, project impact analysis and situation analysis using quantitative & qualitative tools and covering samples as high more than 14,000. The thematic areas on which M&E work can be taken up got expanded by including climate change, disaster management and geohydrology. It has also enhanced its capability of monitoring performance by designing a web-enabled system for monitoring performance of the Gram Panchayats for the state of Maharashtra, which has been pilot tested in Sholapur district. The team have also successfully used satellite image processing & interpretation techniques for measuring the change in land use, forest cover and surface water estimation.

**Capacity building & Training:** SIGMA Foundation is also highly experienced in conducting training need analysis, providing training in all the streams of activities in which it is engaged. 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 trainings are regularly conducted for small group. For larger groups, suitable training venue is hired for imparting training. Evaluation of livelihood interventions and related capacity building on which we have already taken up three projects.



SIGMA Foundation has expertise on various thematic areas on which it takes up monitoring and evaluation (M&E) activities; consultancy for project designing and implementation; information, education & communication (IEC)/ social behaviour change communication (SBCC) for development and capacity building & training. The important thematic sectors are water, sanitation & hygiene (WASH), local governance (both rural & urban), planning, poverty alleviation, public health, nutrition, education, child rights and child development, environment management and climate change. We have been able to enhance our domain knowledge in the said thematic and cross-cutting areas substantially during this year and there has been expansion of our partners and clients. The organisation has always maintained good relation with its partners/clients. It has also delivered good quality outputs within the agreed time frame. Therefore, work quality, punctuality and the overall capability are the keys for choosing us by our clients. Some of the important information in this regard are mentioned below:

## **1. Water Sanitation & Hygiene, and Behaviour Change Communication**

SIGMA Foundation has implemented several projects involving drinking water supply management, monitoring performance of piped water supply scheme, planning for water safety and water quality monitoring through water testing laboratories and Field Test Kits (FTKs). The organisation has also expertise in planning for ground water monitoring & management. It has special expertise in improving performance of laboratories for monitoring chemical and bacteriological quality of water and their accreditation. The team has conducted research on hand hygiene practice across the country in the context of the COVID pandemic and has also worked for promotion of hand hygiene practices among the rural community. SIGMA Foundation in collaboration with UNICEF has constructed several innovative handwashing stations in five blocks of West Bengal. It has also gained expertise in evaluation of IEC/SBCC interventions, designing programme specific messages and tools for communication for awareness generation in WASH and other sectors. The same has been used intensively in rolling out Jal Jeevan Mission in the state of West Bengal.

## **2. Child Rights**

The team of SIGMA Foundation has the experience of working on the areas of Child Rights. It has undertaken study on Child Trafficking across 16 states of the country covering various aspects of trafficking and issues related to Child Rights and has gained such expertise in conducting similar studies. The team has also expertise in monitoring & evaluating adolescent development programme including education, life skill development and vocational training for enhancing their employment opportunities.

## **3. Public Health, Nutrition and Education**

SIGMA Foundation has a dedicated team for conducting research and evaluation in the field of nutrition and public health, particularly for Maternal & Child Health (MCH) and communicable diseases. Recently the team has taken up research on vector-borne diseases across the country. It has assessed the nutritional status of women in certain areas of Pathar Pratima block of South 24 Parganas and of children working in the brick field. It has also acquired good capacity to work in the education sector and have taken up several projects on promotion of early childhood education, building life skill and vocational skill for the adolescents to enhance their employment opportunities.

#### **4. Local Governance and Decentralized Planning**

SIGMA Foundation has a well-versed team for providing consultancy in strengthening governance and strengthening institutional functioning, 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 has implemented projects improving quality of Gram Panchayat Development Plan (GPDP) and simplifying the process of planning using a workbook for preparing GPDP. The team has further gained capacity in localizing SDGs for fast tracking attainment of SDGs in local administrative unit like a Gram Panchayat. The team is also experienced in taking up organization studies for improving governance and delivery of services.

#### **5. Solid and Liquid Waste Management**

SIGMA Foundation has gained good expertise in urban waste management including preparation of DPR, microplanning for segregation, collection and transportation of waste from households, taking up IEC activities and building capacity of the urban local bodies. Designing treatment of the collected waste and related capacity building of the Urban Local Bodies (ULBs) is another area of expertise of the team. It is also well equipped in providing consultancy on management of sewage water. SIGMA Foundation has been supporting urban solid waste management programmes in 35 ULBs of West Bengal.

#### **6. Environment & Climate Change**

Environmental studies, particularly those related to impact of climate change and adaptation of practices for reducing adverse impact of the same has been the latest addition in the thematic areas on which it has its presence. It has already taken up three studies/evaluation works in this field. SIGMA Foundation has already done a study on impact of climate change on availability of water and also on agriculture in three blocks within Damodar Valley Corporation area in the districts of Bankura and Hooghly of West Bengal.

#### **7. Women Empowerment, Livelihood and Poverty Alleviation**

Women's empowerment is critical for success in many interventions covering livelihood promotion and poverty alleviation. SIGMA Foundation has specialization on various aspects of gender and women's empowerment. Its multidisciplinary team has capacity to design and take up projects for strengthening livelihood and alleviation of poverty with focus on improving gender equity and empowering women to internalize the issues and work for their own development with due facilitation.

#### **8. Technology driven Real-time Monitoring**

The inhouse IT team of SIGMA Foundation has prolonged experience and expertise of application of ICT in monitoring including development of web-enabled system for Real-Time Monitoring through Mobile Telephony and spatial analysis using GIS, Analyses of big data generated through programme MIS and its interpretation for decision support in various fields. Developing 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.

## COMPLETED DURING 2021-2022

## I. Design and Development of Android run Mobile Application and Dashboard for 2nd Level ODF Verification

**Client name:** WSSO, Maharashtra

**Duration:** July, 2019 to August, 2019

With the initiative of the Government of Maharashtra through its Water and Sanitation Support Organisation, a data capturing and monitoring system was developed by SIGMA Foundation for the second level ODF verification. The main purpose of the initiative was to improve the quality of survey as well as to capture data directly on an Android run device which would also help compilation of the findings over a longer period. Broadly the aim was to design and develop a Mobile Application for collecting sanitation related information from Household, Anganwadi centre, School, Public Toilet, and Community Toilet and view/analyse the data from web application through dashboard, reports etc.

The system had two types of application –

- ✓ Mobile Application
- ✓ Web Application

## i) Web Application:

- Design & Develop Web Application having module for User creation, user management for various level
- Allocation/De-allocation of Surveyor (Users') work area
- Customized Report/Dashboard based on back-end data analysis
- Raw data download into Excel format
- Master record preparation and Legacy Data Migration



## ii) Mobile Application:

- Design & Development of Mobile Application for capturing real time information of primary details, sanitation details and water & Cleanliness details for Household, School, Anganwadi, Community Toilet, Public Toilet
- Login Module
- Background data Synchronization
- Online & Offline data capturing mode
- Data validation and relation between various fields
- GPS location of surveyed object capturing
- The App is available on Android platform
- App runs on Android 5.0 and higher



## 2. Endline Evaluation on Climate Adaptation and Resilience Building on Sundarbans Islands

**Client name:** Hoffnungszeichen | Sign of Hope e.V.

**Duration:** August, 2021 to September, 2021

The primary target of the project was conservation of Sundarbans's rich yet threatened natural resource base of flora and fauna; increase the number of trees which are important for carbon dioxide absorption, coastal communities of the Sundarbans through their transition to sustainable eco-friendly livelihoods, improvement of agricultural methods and provision of alternative income sources; so that the negative mitigation measures are reduced.

The purpose of the final evaluation was to elaborate whether the implemented measures showed the expected results in order to reach the projected outcomes and impact. The evaluation informed the implementing organization DRCSC as well as the facilitating organization SoH about the final status



of the project with reference to the project indicators given in the project proposal. The results of the evaluation outlined the achievements of the project according to the given indicators set out in an indicator matrix, identified the project's successes and lessons learned, and provide recommendations for potential future projects.

The study commenced with the development of inception report including the tools for primary

survey. The survey area covered 16 villages in three GPs namely Patharpratima, Ramganga and Brajaballabpur in the Patharpratima block. The Endline evaluation followed OECD-DAC evaluation criteria of relevance, coherence, effectiveness, efficiency, sustainability and impact. Feedback gathering mechanism was followed in the process of evaluation which included quantitative as well as qualitative primary survey and analysis of satellite images to know change in forest (mangrove) cover. With the help of primary survey, beneficiaries and various stakeholders were reached to collect first-hand information of the project. The results of the evaluation, comprised in a comprehensive report have outlined the achievements of the project according to the thematic indicators.

## 3. Baseline Evaluation of Adaptation to Climate Change and Resilience Building on the Sundarbans Islands through Afforestation and Promotion of Sustainable Livelihoods

**Client name:** Hoffnungszeichen | Sign of Hope e.V.

**Duration:** August, 2021 to February, 2022

Sundarbans has an exotic but a fragile ecosystem. The islands have faced severe degradation in the past few years. Regeneration of the endangered ecosystem of Sundarbans through afforestation and

strengthening the capacities of the target groups and local stakeholders to manage natural resources independently and sustainably and to build sustainable livelihoods is the need of the hour. Keeping this in mind, lobbying and sensitization of target groups, civil society and government institutions to incorporate climate change adapting strategies into local development plans with emphasis on participatory involvement is needed. The project by Hoffnungszeichen | Sign of Hope e.V planned to organise this registered community-based organisations (SHGs, FPOs and others), which already exist or are to be founded. The direct target group was 3000 households.



The purpose of the study was to obtain reliable data about the current (initial) indicators figures-measuring the outcome and outputs in the project region and of the target group (3000 households from 13 villages withing the defined project region). Additionally, the indicators were checked for complying with the SMART principles and were refined where needed and a clear methodology for their measurement was to be set up.

For this study the primary survey was carried across 13 villages and 3 GPs of 2 blocks. The survey was conducted in 7 villages of G-Plot, 5 villages of Frazerganj and 1 village of Brajaballabpur, taking the aforesaid stakeholders for feedback gathering. After the survey, the report is being prepared with key recommendations which will help SoH to Identify potential obstacles, risks and alternatives to overcome the foreseen challenges.

#### 4. Study to understand the landscape of vector borne diseases in India

**Client Name:** Catholic Relief Services

**Duration:** September 2021 to October 2021

The overall objective of the study was to understand the landscape of vector borne diseases in India. This has helped CRS in zoning down to 1-2 vector borne diseases and further explore the opportunities to work in the high burden states of India. Further, this study also aimed at understanding government program and priorities, key gaps, competitive landscape, donor landscape, and donor priorities with respect to vector-borne diseases in India. It was done in two stages. In the first stage of the study, desk review was conducted using relevant and secondary data to identify key vector-borne diseases prevailing in India and identify high-burden states. The second stage of the study was to understand the status of implementation of National Vector Borne Disease Control programs specific to the vector borne diseases selected and the challenges that the system is facing in the execution of the programs. This was done by collecting qualitative insights from four government officials and public health experts. In the end, this study enabled CRS to make specific interventions on a couple of vector-borne diseases in certain high burden states of India.

## 5. Preparation of Final DPR for Municipal Solid Waste Management in 12 Urban Local Bodies of West Bengal

**Client:** State Urban Development Agency (SUDA), Government of West Bengal

**Duration:** September 2021 to November 2021

SIGMA Foundation was engaged by SUDA vide Order No. SUDA-471/2019/1712 dated 08/07/2021 to prepare specific micro-plan cum for management of solid waste in 12 more Urban Local Bodies (ULBs) of the state along with preparation of DPRs for municipal waste management. The scope of work, as per the Work Order, broadly covered assessment of the quantum and nature of waste, existing system of SWM, micro-planning for door- to-door collection of waste from every Household (HH), every Non-Residential Premises (NRPs) in a segregated manner and important public places, transportation of the waste, processing of waste including location of suitable land for establishment of processing plants for both wet and dry waste, proposing suitable Sanitary Land Fill (SLF) Site, examination of existing trenching grounds, suggestion of viable business models for recycling waste, strengthening administrative arrangement for efficient management of MIS and IEC activities at various level for behavioural change.

## 6. Guide for Water Safety Planning for Rural Drinking Water Supply in Uttar Pradesh

**Client name:** Aga Khan Foundation

**Duration:** October 2021 to February 2022

Aga Khan Foundation (AKF) has been working in the State of Uttar Pradesh for improvement of Water, Sanitation and Hygiene (WASH) to address the challenges faced by the poor and marginalized communities. Aga Khan Foundation intends to have a Guidebook on Water Safety Planning (special emphasis on Uttar Pradesh) for the need and improvement of maintenance of the rural water supply system for ensuring sustained delivery of services with the prescribed standard quality as per ISO 10500 2012. In this connection, AKF with the technical and financial support from the World Health Organization (WHO) SEARO has undertaken the task of preparing Water Safety Plan (WSP) Guidebook to assist the stakeholders in the State of Uttar Pradesh engaged in implementation of Jal Jeevan Mission (JJM) to be aware of and understand the process involved in maintaining proper quality of drinking water. AKF assigned the task of preparing the guidebook to SIGMA Foundation and finalized the Guidebook within a month. The main aim of this Guidebook was to provide guidance



to the local governments and others involved in implementation of the JJM to integrate drinking water quality and supply of safe water from the planning to the operation & maintenance (O&M) stage.



## 7. Situational Analysis (Baseline) - Creating Learning Opportunities and Better Nutritional Practices for the Children on Move in West Bengal

**Client name:** Save the Children, West Bengal

**Duration:** October, 2021 to March, 2022

The industries which run mostly on migrant labour is brick making or brick kilns. Up to 63% of the brick kilns are found in the northern Indo-Gangetic plains in the Punjab, Haryana, Uttar Pradesh and West Bengal. Brick kiln workers are mainly seasonal migrant workers who migrate for six months or more with their families to the kiln sites. Lack of livelihood sources in the villages forces parents to migrate along with their children to work at the brick kilns. Children accompanying migrant parents to the brick kilns face a more difficult life due to factors like social and cultural isolation, participating in work alongside parents, vicious cycle of extreme poverty, poor health conditions, language barriers, poor educational attainment etc. With outbreak of the pandemic and resultant nation-wide lock-down, many of the migrant workers were stuck at brick kilns and had to face acute financial crisis. Thus, the situation for the children of the migrant families further deteriorated with regard to their access to education, nutrition and other essential services. Within this backdrop, Save the Children India planned for a project viz. “Creating Learning Opportunities and Better Nutritional Practices for the Children on Move in West Bengal” in Malda and North 24 Parganas districts (where brick kiln industry thrives and child labour is considerably high) to support the children of the migrant families in brick kilns in accessing nutritional supplementary services, education and other essential services.

To assess the present status of these migrant children in the brick kilns related to their education, nutrition care and WASH in post-COVID situation and



to provide a reference to the above-mentioned project, a baseline study has been conducted by SIGMA Foundation.

The study has followed a mixed method approach and the research tools have been designed to collect both quantitative information using structured questionnaires and qualitative information through Key Informant Interviews (KII) or Focus Groups Discussions (FGD) using appropriate semi-structured discussion points. The primary survey was conducted across brick-kilns in one block of North 24 Parganas and 2 blocks of Malda. The primary target group were mothers of child aged 0 to below 18 years old and adolescents (aged 11+ to below 18 years).

## 8. Endline Evaluation of “Ready to Learn: Strengthening Quality of learning for 3-6 Years Old” in Khorda District

**Client name:** Save the Children, Odisha

**Duration:** December, 2021 to February, 2022

The endline evaluation focussed on the extent to which “Ready to Learn: Strengthening Quality of Learning for 3-6 years old” has delivered relevant, effective, impactful and sustainable activities to its beneficiaries. The evaluation was conducted following the OECD-DAC evaluation criteria in context of rural Khorda.

Save the Children designed a multipronged intervention at level of ICDS functionaries which include



ICDS functionaries, Anganwadi workers, Anganwadi Helpers, Anganwadi Supervisors and parents of 306 years children in the respective Anganwadi Centres. The duration of the intervention was for 36 months (January, 2019 to December, 2021). The intervention aspires to enhance the overall school readiness of a child by improving the key domains of development namely, Emergent literacy, Emergent mathematics skills, Socio-emotional skills and Motor skills through a trickle-down model of change.

The study involved collection of quantitative data based on questionnaires from 1128 samples (705 students, 282 mothers and 141 Anganwadi workers).

Qualitative data was collected from 4 stakeholders namely- Anganwadi worker supervisors, Officials of ICDS from block levels, mothers and Program

coordinators of Save the Children team. Further, some check-list based observations were made in 141 AWCs. The survey was completed in 3 weeks using Android run application developed by SIGMA Foundation using Kobo Collect for easier data management. The study shows how proper training of parents and AWW and AWW Supervisors can play a significant role in enhancing the child-friendly interaction and promoting child-friendly learning environment at home and at AWC. These, in turn can significantly enhance development outcomes of a child aged 3-6 years.

## ONGOING DURING 2021-2022

## I. Bottleneck Analysis of Hand Hygiene Program with Focus on Technical and Operational Issues Preventing Scaling-up in Rural Areas of India

**Client name:** UNICEF India Country Office

**Start date:** September, 2021

Sustainable Development Goal 6.2 aims to ensure basic sanitation and hygiene for the entire global population by 2030. This encapsulates the need for providing affordable hand washing facility to every household including all the vulnerable households. Improving handwashing practices greatly depend on the availability of adequate supply of water. Having said that, only 54.2% households in India are covered under Functional Household Tap Connection (FHTC) as on October, 2022 and rests are either partially covered or uncovered. Most of the available data on handwashing in India unravels that critical data gaps in the sector are limiting consistent programming supporting hand hygiene.



UNICEF has supported the installation of 15,805 hand washing stations in rural communities which has motivated the local government to scale up the initiative with their own resources as of November 2020. Therefore, there is a need for a strong hand hygiene policy framework which will include setting up of the infrastructure, its operation and maintenance and enabling environment for promotion of hand washing. The project aimed to promote sustainable behaviour change amongst the community through target specific social and behaviour change communication for adopting handwashing at critical times as a way of life. With this backdrop, UNICEF India Country Office proposed to conduct a study on understanding the bottlenecks of hand hygiene promotion with a focus on technical and operational issues for scaling-up hand hygiene promotion in rural areas of India. This study was conducted in the states of Andhra Pradesh, Assam, Madhya Pradesh, Odisha and West Bengal. It further included 1516 households, 85 Government Officials, 30 Frontline workers (ASHA workers, Anganwadi workers, Swachhgrahi), 10 schoolteachers, 10 technicians (plumbers), 10 fabricators, 10 shopkeepers, 5 NGOs and 5 ITIs. It also used checklists to understand the hand hygiene infrastructure in 207 public institutions (schools, anganwadi centres, health facilities, Gram Panchayat/Government offices), 33 public places (markets etc.) and 69 food stalls. Based on the findings, a report was prepared with key recommendations which would assist UNICEF to understand the existing bottlenecks in the demand as well as supply side processes, gaps present in the policy guideline documents, and possible ways to bridge the gap.



## 2. Solid Waste Management in Ward No. 80 of Kolkata Municipal Corporation

**Client name:** Water for People India Trust and ITC Ltd

**Start date:** March, 2021

ITC Ltd desired to study the status of municipal solid waste management in Ward No 80 of Kolkata Municipal Corporation (KMC) where one of their factories is located. SIGMA Foundation was engaged through Water for People India Trust to assess the total quantity of degradable and non-degradable waste in the said Ward along with the current status of collection, transportation and treatment of waste by the KMC. The quantity and physical/chemical characteristics of the waste generated within the Ward was estimated and reported. Taking up decentralized (mahalla based) waste management in the locality with ownership and participation of the community and with support of the KMC was recommended.

## 3. Providing Handholding Support & Capacity Building to the 34 Urban Local Bodies (ULBs) for implementation of SWM Plan as per SWM Rules, 2026 Solid Waste Management

**Client name:** State Urban Development Authority

**Start date:** September, 2021

Most ULBs continue to face challenges not only in the areas of appropriate and advanced collection



and transportation systems, technology selection for composting and proper disposal of waste but also in lack of awareness of the citizen on management of waste. The overall goal of the awareness generation and



communication plan is to attain a positive behaviour change among people with respect to the various



Discussion on Microplan at Kharagpur Municipality

phases of waste management and with proper appreciation of the adverse impact on public health due to failure of waste management. In context of Solid Waste Management, IEC will play a pivotal role in creating awareness and mobilizing people from household to ULB level. As a follow-up to the Micro Plan prepared for ULBs, SUDA has entrusted SIGMA Foundation with the role of spreading IEC and Capacity Building amongst the various stakeholders of SWM. SIGMA's role at this stage also involves supervision of the segregated waste collection, transportation and disposal in segregated manner. As a further step, SIGMA also acts as the technical expert for wet and dry waste processing at the ULBs.

## 4. West Bengal Drinking Water Sector Improvement Project (WBDWSIP) – Support enabling and skilling communities for sustainable O&M of services in Bankura District of West Bengal

**Client:** Public Health Engineering Department, Government of West Bengal, with support from the Asian Development Bank

**Start date:** May, 2019

The Sustainable Development Goals recognise water and sanitation as human rights and have set targets on 'universal' and 'equitable' access to water, sanitation and hygiene by 2030. In line with the state's VISION 2020 document, a new initiative, namely West Bengal Drinking Water Sector Improvement Project (WBDWSIP), has already been started by the Public Health Engineering



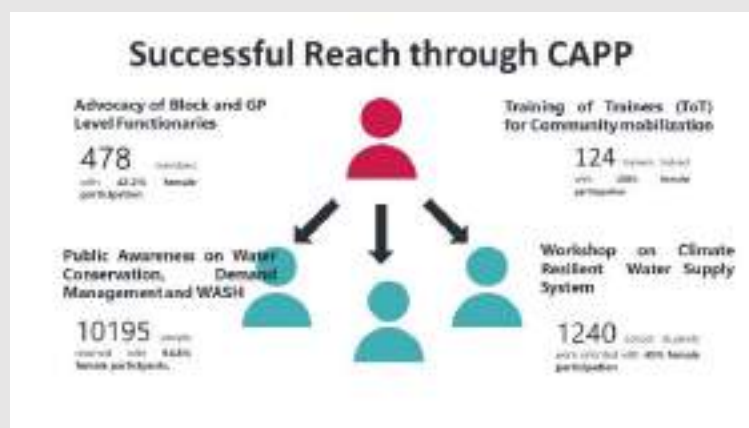
Department (PHED), Government of West Bengal to address the issues of water security and safety in the state of West Bengal. It aims to provide safe and reliable drinking water to about 1.65 million people in the arsenic, fluoride, and salinity

affected areas of North 24 Parganas, Bankura and East Medinipur of West Bengal, which should maintain the Bureau of Indian Standards (BIS), GoI norms. 2. The project is assisted by Asian Development Bank (ADB) and this will be the first time in India to supply safe water on a 24x7 basis. SIGMA Foundation has been entrusted as the NGO consultant for the Bankura sub-project.

*SHG Training Session at Midnapur Municipality*



Throughout the year rigorous community mobilization has been done in 31 project GPs of Bankura District. Even on the onset of pandemic the work of WBDWSIP was carried forward by the foot soldiers of SIGMA Foundation relentlessly. Time Use Survey was used to study the gender aspect, various training curriculums were developed,



case study of two villages dealing with water crisis was developed and numerous IEC materials were developed. Smart Customer Care Centres are in the process of functioning for addressing grievance redressal system. The outreach of the program was immensely successful through the Community Action Participation Plan (CAPP) as illustrate.

SIGMA Foundation also prepared the **first Water & Sanitation Safety Plan** for one Gram Panchayat

of West Bengal under this project. The publication of the same was launched at the ADB E- Market Place in 2021.

#### 5. Support to Institutional Strengthening of GPs, Quality Local Level Planning and Developing GP Level Data & Monitoring Mechanism for evidence based and inclusive local governance in Karauli district of Rajasthan

**Partner:** UNICEF Rajasthan State Office

**Start Date:** October 2021

UNICEF Rajasthan State Office has been supporting the state of Rajasthan for strengthening their Panchayat system. In this regard, a project was taken up in partnership with SIGMA Foundation with the following objectives:

- i) To strengthen the Project GPs with well-designed hybrid models of face-to-face and online Capability Building & Training (CB&T) interventions.
- ii) To provide handholding support to the GPs of Karauli block through dedicated teams in transforming the existing systems into desirable ones for efficient, effective and equitable delivery of essential services, especially for women, children and most marginalised communities, in alignment with the SDGs.
- iii) To develop some easy tools (workbooks) which will be possible to follow by the facilitating team in preparing GPDP at their expected level of capacity, which will also be developed as a part of the project.
- iv) To develop a GP database and a web-enabled MIS to assist planning and monitoring progress through GPDP.
- v) To develop the Project GPs as viable and replicable models for other GPs in the District and the State to follow.



A two-member team was stationed in Karauli to provide intense handholding support to the Gram Panchayat functionaries as well as sensitizing the community on local planning and the priorities keeping in mind the wellbeing of the women and children. The work started with a situation analysis, based on which the capacity building programme was designed and the process of planning was prepared. Gram Panchayat Development Plans were prepared based on the new approach after intensive consultation of the Panchayat members and the community for the 32 Gram Panchayats of Karauli. The interventions have been continuing at the end of the year.



## 6. Facilitating Implementation of Jal Jeevan Mission, Climate Resilient WASH Interventions and Mainstreaming Hand Hygiene in Context of COVID-19 Pandemic in West Bengal

**Client name:** UNICEF West Bengal State Office

**Start date:** July 2021

The project had three major components; The first one was related to implementation of Jal Jeevan Mission (JJM) in 49 GPs across 4 districts of West Bengal through preparation of Village Action Plans (VAPs) along with IEC/SBCC costed plans. The outputs included drafting of policy guidelines and implementation documents in the context of implementation of JJM in West Bengal, supporting Public Health Engineering Department (PHED), Govt. of West Bengal in engagement of implementing support agencies (ISAs) followed by orientation of senior PHED officials at state and district level on preparation of VAPs and rolling out of the same. A monitoring framework was also developed for the monitoring the performance of the ISAs.



The second component of the project dealt with strengthening partnerships for Integrated Water Management (IWM) through convergence and greater coordination between PHED, Irrigation & Waterways and Panchayat & Rural Development department. The part was taken up by UNICEF with SIGMA Foundation as a partner, as per request from AIIB (Asian Infrastructure Development Bank) to strengthen the irrigation infrastructure of the Damodar Valley Corporation (DVC) for which World Bank and AIIB have been supporting the Irrigation & Waterways department of the state of West Bengal. One critical component of the project was to conduct a Situational Analysis on water security, availability and usage and Communication Needs Analysis for Climate Resilient Water Management (CRWM) in three Blocks (under DVC command area) were carried out. Further, analysis of ground water level using the data from 38



Observation Wells (belonging to the government) to assess the status of sustainability of ground water in those areas. Further, selected Gram Panchayats were trained to continuously measure and monitor the ground water and in the next phase they will be trained to make interventions for improving sustainable availability of ground water. In order to involve the community and the local government in ensuring safe and secured water, 793 Panchayat representatives and other stakeholders from 30 Gram Panchayats were trained on CRWM and planning or disaster risk mitigation. The third component focused on a massive outreach to communities through hand hygiene campaigns and camps



through which 7,075 people were reached with 63% female participation. Innovative low-cost hand wash stations were installed in 5 blocks of the 4 districts. Soak pits were constructed near each hand wash station to put an emphasis on grey water management and raise awareness on the issue. Further a resource pool was generated who were trained on the know-how of the hand wash stations.

### 7. Support for Implementation of Jal Jeevan Mission in Aurangabad District in Maharashtra

**Client name:** Aurangabad Zilla Parishad, Maharashtra

**Start date:** October, 2021

Jal Jeevan Mission is a national flagship programme which is being implemented across the country. SIGMA Foundation was appointed as the Implement Support Agencies (ISA) by Aurangabad Zilla Parishad on being selected by the Water & Sanitation Support Organization of the Government of Maharashtra. It has been working in 50 villages within Gangapur Taluka of the district and the work will continue during which two other blocks will be covered.



### 8. Household Survey of Project "UTTAN"- Empowering Community

**Client name:** OXFAM India

**Start date:** September, 2021

Sitamarhi district of Bihar is primarily a rural district, 88.7% of the total population (as per Census 2011) lived in rural areas. In this district, there is substantial concentration on minority (mainly Muslims) population. Against the state average of 16.9%, Muslim constituted 21.6% of the total population in this district. Moreover, it is mention worthy that the district has been identified as one



of the 90 minority concentrated backward districts in the country by Ministry of Minority Affairs, Government of India. Continuous floods and other disaster pose serious challenges to people threatening their livelihood in lieu of the agrarian economy of the region. In this context, Oxfam India with the support of HDFC Bank planned for a project intervention namely "UTTAN – Empowering the community" in Sitamarhi district of Bihar to improve

the condition and standard of living of the people through effective intervention.

The primary goal of intervention was the socio-economic empowerment of the marginal community by enhancing the livelihood options and improving accessibility planned to essential services. The

interventions included change in practice of agricultural production, organizing entrepreneurship development training, smart classes for school students, renovation of schools and Anganwadi centres etc.

The need for the assessment was to study the primary survey-based study. Under the assignment, the inception report was prepared which included detailed methodology, schedule of activities for conducting the study. Based on the field survey and PRA, the Baseline report was prepared that helped in prioritizing the key intervention areas, profiling the villages etc.

## 9. National Study on Child Trafficking in India

**Client name:** Kailash Satyarthi Children's Foundation

**Start date:** November, 2021

This is a nation-wide study for assessing the prevalence and trends of child trafficking in India. The subject has remained a major concern across the world for a long period of time and is presently referred under the umbrella term Modern-day Slavery. The project is also aiming to explore the underlying causes and challenges for combating this problem in India. Along with that it is trying to examine the nature and extent of vulnerabilities of the households to child trafficking and the factors/reasons which make a family vulnerable to this problem. Finally, this study would come up

with some actionable measures to control child trafficking in the country including prevention and detection. The field survey was conducted in the 16 concerned states. The study entailed collecting qualitative as well as quantitative data. Around 400 KIIs and FGDs were conducted for qualitative analysis and quantitative data was collected from 14,400 vulnerable households. Stakeholders like



NGOs, government officials, ChildLine were approached to identify the most vulnerable villages and trafficking hotspots as well as their views and experiences were recorded in the qualitative interviews to understand the nature of trafficking prevalent in the particular districts. Case studies were recorded with rescued victims to understand their experiences. The pre-final report has been prepared and sent to Kailash Satyarthi Children's Foundation for their recommendations.

## 10. Baseline Study for Project Titled New Horizons Plus 2020-23 in West Bengal

**Client name:** Save the Children

**Start date:** January, 2021

Save the Children India is implementing a project on Child Poverty entitled, “New Horizons Plus, 2020-2023” in Kolkata and South 24 Parganas districts of West Bengal. They desire to scale up its on-going New Horizons Programme in West Bengal. The proposed interventions of their project are to break the vicious cycle of intergenerational poverty by bringing marginalized adolescents and youth (15-24 years) under existing government’s skilling platform, linking them with dignified livelihood options and facilitating linkages with government sponsored social security schemes. This Baseline study will help to understand the present status of the adolescent and the youths of the intervention areas, which will be relevant to the project. The study will follow mixed method approach i.e., a combination of quantitative and qualitative research. Therefore, the research tools will be designed to collect both quantitative information using structured questionnaire and to also collect qualitative information to be captured through Key Informant Interview (KII) or Focus Groups Discussion (FGD) using appropriate semi-structured discussion points. With the help of the research tools, the target population (the adolescent and the youth) and the important stakeholders (their family members and the community etc.) will be probed to get the required information.



## II. Study of the Institution of Gram Kachahari in Bihar

**Client name:** Azim Premji University

**Start date:** May, 2021

The state of Bihar has a unique system of elected judiciary, called Gram Kachahari, which provides access to judicial services related to petty offences of both criminal and civil nature to They are elected by the voters of the Gram Panchayat area as per provision of the Bihar Panchayati Raj Act, 2006. The Act prescribes that disputes are to be settled amicably, as far as possible, by the Gram Kachahari.



Women Sarpanch, Secretary and Nyay Mitra in a Gram Kachahari

qualitative and quantitative data was collected from those institutions as well as from the community residing within their jurisdiction.

This study was taken up by SIGMA Foundation with grants from the Azim Premji University. The objectives were to know how the system functions, type of disputes which are reported for settlement, the quality of judicial services delivered, the bottlenecks and barriers faced and possible improvement of the system. A sample of 15 Gram Kachahris across all the 9 administrative divisions were covered and both



## WORLD AQUA CONGRESS WAC XV

Three individual research papers from SIGMA Foundation have been published in the esteemed platform of XV World Aqua Congress, 2021. The International Congress is a strong woven platform for national and international water stalwarts across the globe (Organized by Aqua Foundation, New Delhi). The recommendations from the platform are used as strong technical support to the central ministry, Govt of India while drafting future guidelines in the advancement of addressing water issues in the country. The published authors from the organization are Dr. M.N. Roy (President), Dr. Debasri Mukherjee (Sr. Research Officer) and Er. Sohini Tarafdar Chatterjee (Research Officer).

**15th World Aqua Congress (XV WAC)**  
International Conference & Exhibition  
Theme: Valuing Water (Beyond Pricing... Environmental, Social and Cultural Value)  
14th - 17th September 2021 - A Virtual Event  
www.worldaquacongress.org

**Speakers- Water Resources: Availability, Management, Quality**

- Dr. M.N. Roy, President, SIGMA Foundation
- Dr. Debasri Mukherjee, Sr. Research Officer, SIGMA Foundation
- Dr. Sohini Tarafdar Chatterjee, Research Officer, SIGMA Foundation
- Dr. M. N. Roy, President, SIGMA Foundation
- Dr. Debasri Mukherjee, Sr. Research Officer, SIGMA Foundation
- Dr. Sohini Tarafdar Chatterjee, Research Officer, SIGMA Foundation
- Dr. M. N. Roy, President, SIGMA Foundation
- Dr. Debasri Mukherjee, Sr. Research Officer, SIGMA Foundation

**Speakers- Action Plan for Vulnerable & Over-exploited Areas**

- Dr. M. N. Roy, President, SIGMA Foundation
- Dr. Debasri Mukherjee, Sr. Research Officer, SIGMA Foundation
- Dr. Sohini Tarafdar Chatterjee, Research Officer, SIGMA Foundation
- Dr. M. N. Roy, President, SIGMA Foundation
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**Speakers- Water for All: Action Plan**

- Dr. M. N. Roy, President, SIGMA Foundation
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- Dr. Sohini Tarafdar Chatterjee, Research Officer, SIGMA Foundation
- Dr. M. N. Roy, President, SIGMA Foundation
- Dr. Debasri Mukherjee, Sr. Research Officer, SIGMA Foundation

PARTICIPATION IN IMPORTANT EVENTS



## CSE IMPACT ALUMNI WORKSHOP

Dr. M. N. Roy was invited as one of the key speakers in the CSE Impact Alumni Workshop on 12th August, 2021. The event was organised on virtual platform by Centre of Science and Environment (CSE). Dr. Roy shared the journey of Preparation of Water and Sanitation Safety Plan for Brahmandiha GP of Bankura District in West Bengal and the role of CSE in its preparation.

## WEB TALK ON DIGITAL WATER GOVERNANCE IN INDIA

Dr. M. N. Roy, President, SIGMA Foundation was invited as the key expert by Maithri Aquatech in its 8<sup>th</sup> Episode of the Web-Talk series named “Assuring Water Security with Quick-fit and Re-deployable Infrastructure” on the 20<sup>th</sup> August, 2021. The virtual event was featured in association with Rotary Bangalore Whitefield Central. Dr. Roy spoke about SIGMA Foundation’s emerging role in the Digital Water Sector and on implementing digital water governance in India, its opportunities and challenges. The talk gave a detailed picture of the application of community friendly digital technology and smart water management in the context of rural India, the association, challenges and possible solutions.



## PAPER PRESENTATION BY DR. SABARI BANDYOPADHYAY ON RURAL POPULATION PROJECTION STUDY OF SOME GRAM PANCHAYATS IN INDIA

Oral paper presentation of the paper “Rural Population Projection: A Study on Some Gram Panchayats of West Bengal” at Golden Jubilee Celebration and Annual Conference of the Indian Association for the Study of Population (IASP) held using virtual mode, during November 26-28, 2021.



- **“Green Economy and Role of Gram Panchayat”**. Sabari Bandhapadhyay in Economic Analysis of Law (edited by Dr. Rabindra Kr. Pathak and Dr. Shweta Mohan) Thomson Reuters Legal (A division of Thomson Reuters South Asia Private Limited), 2021, pp.107-114, ISBN: 978-93-91340-17-9.
- **“Inter-regional Variations of Fertility Contours in India: A Multilevel Modelling Approach”**. Debojyoti Majumdar, Ghosh, S., Siddiqui, Z., Occasional Paper – 74, Institute of Developmental Studies Kolkata (2022)
- **“Brahmaputra River: Climate, Cooperation and Conflict”**. Dr. Debasri Mukherjee and Dr. M.N. Roy. World Focus (Peer Reviewed) Journal. August 2021. ISSN 2230-8458. PP-88-97.
- **“Water Quality Management Through Jal Swapna Programme in West Bengal State”**. Dr. Debasri Mukherjee. XV World Aqua Congress International Conference Proceeding Book (Edited by Dr. Sanjay Rana-Impactor factor is 2.250). September 14-17. PP-46-56.
- **“Valuing Water Through Water Security and Involvement of Community”**. Dr. Debasri Mukherjee, AquaBuzz September Newsletter.
- **“Know Their Stories: A Case Study on the Existing Water Crisis in Nabashan Village, Bankura District.”** Dr. M.N. Roy and Dr. Debasri Mukherjee. 24<sup>th</sup> December 2021. Everything About Water (EAW).
- **“Digitalization of Water Sector for Inclusive Water Management”**, Sohini Tarafdar Chatterjee. XV World Aqua Congress International Conference Proceeding Book (Edited by Dr. Sanjay Rana), October, September 2021. Page 290 – 298

## SIGMA FOUNDATION BAGGED THE WATER CHAMPIONS 2021 AWARD BY CSE NEW DELHI

SIGMA Foundation has been selected for the Water Champions 2021 Award by Centre for Science and

Environment (CSE), New Delhi. Eleven eminent national and international partner organizations of CSE were selected by the jury members based on the organization's contribution in the field water research as presented in 2nd Online Impact Workshop cum Master Class on Capacity Building initiatives for Citywide Water and Sanitation Management held on 11th to 12th August, 2021. SIGMA Foundation has earned accolades for their unique

work of "Preparation of Water and Sanitation safety Plan" for Brahmandiha GP of Bankura District in West Bengal. The work was supported by Public Health & Engineering Department (PHED), Govt. of West Bengal and financed by Asian Development Bank (ADB) in the official website of WBDWSIP.



The poster for the 'Water Champions 2021' event features a hand holding a globe with water splashing over it, set against a city skyline. The event is organized by CSE and AAETI. It includes a 2nd Online Impact Workshop cum Master Class on Capacity building initiative for Citywide Water and Sanitation Management, held on 11-12th August, 2021.

**Theme 1: Sustainable Water Management**

 <b>KIRSTY CARDEN</b> (PROGRAMME PARTNER) Interim Director, Future Water Institute (UCT), South Africa	 <b>MD. ZAHID HOSSAIN</b> (ALUMNI) Consultant, UNICEF-Bangladesh	 <b>K.S. JAYACHANDRAN</b> (ALUMNI) Special Secretary (Environment & Forests), Govt. of NCT of Delhi	 <b>ASHWANI LUTHRA</b> (INSTITUTIONAL PARTNER) Professor, Guru Nanak Dev University, Amritsar	 <b>HINA ZIA</b> (INSTITUTIONAL PARTNER) HOD, Faculty of Architecture and Ekistics, Jamia Millia Islamia, New Delhi
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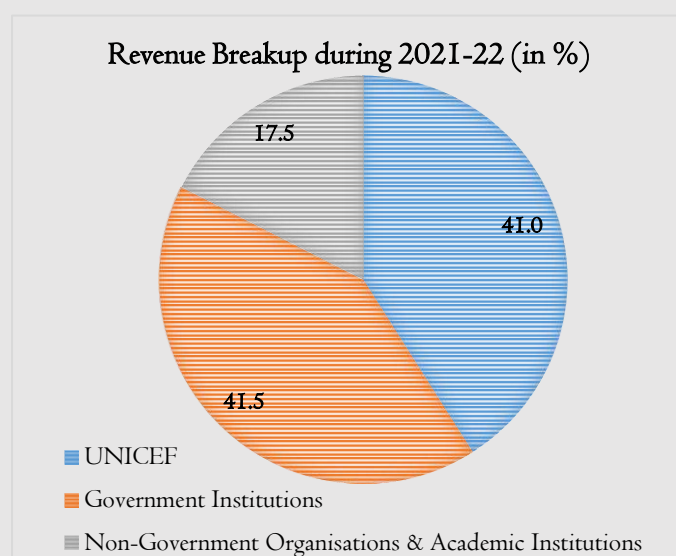
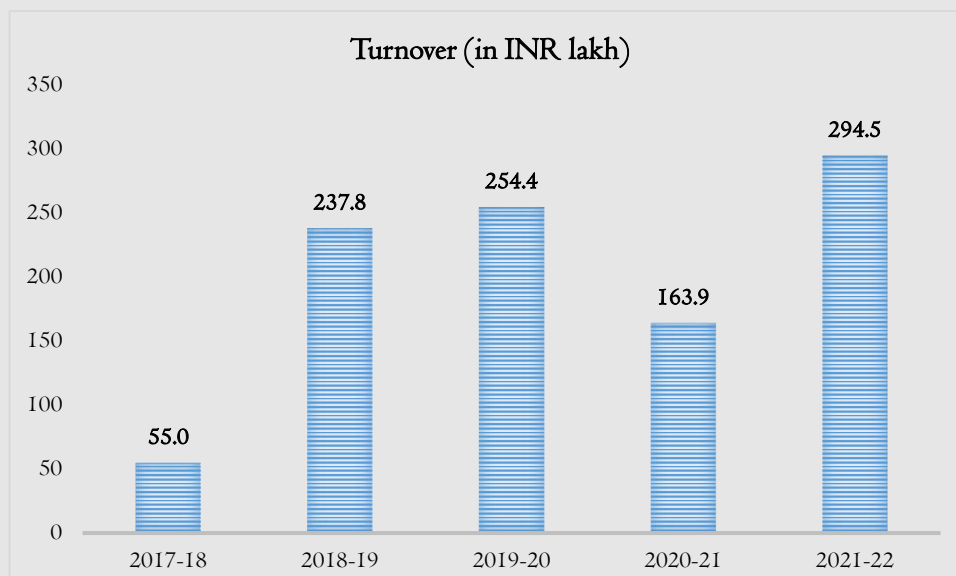
**Theme 2: Sanitation, Wastewater and Faecal Sludge/Septage Management**

 <b>NATASHA ZARINE</b> (ALUMNI) Managing Director, Ecosatva Environmental Solutions, Aurangabad, India	 <b>A K GUPTA</b> (INSTITUTIONAL PARTNER) Additional Director, RCUES, Lucknow, India	 <b>M.N. ROY</b> (PROGRAMME PARTNER) President, Sigma Foundation, Kolkata, India	 <b>DAMIR BRDJANOVIC</b> (INSTITUTIONAL PARTNER) Professor, IHE Delft/ GSGS, Netherland	 <b>VINEET KUMAR</b> (INSTITUTIONAL PARTNER) Assistant Director, SUDA, Jharkhand, India	 <b>RAJAT GUPTA</b> (INSTITUTIONAL PARTNER) Senior Specialist, NMCG, India
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The year 2021-22 has been a fruitful year for the SIGMA family. 15 new projects were signed and 12 projects were completed during the year. The annual turnover was INR 294.54 lakhs which was the highest over the last 5 years.



Flagship programmes with UNICEF and Non- Government Organisations yielded major revenue in the Financial Year 2021-22. Revenue from UNICEF was 41%. Non-Government Organisations and Academic Institutions like Kailash Satyarthi Children's Foundation, Azim Premji University, Oxfam India, Save the Children, etc. contributed nearly 41.5%. Government institutions like PHED, SUDA, District Water & Sanitation Mission (Maharashtra) have contributed 17.5% of the revenue in financial year 2021-22.



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SUNDARBAN SOCIAL DEVELOPMENT CENTRE



**J. WALTER THOMPSON**



**Public Health Engineering Department**  
Government of West Bengal



GOVERNMENT OF ASSAM  
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**State Water & Sanitation Mission**  
Water Supply & Sanitation Dept., Govt. of Maharashtra



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