

ANTHROPOLOGICAL SURVEY OF INDIA MINISTRY OF CULTURE GOVERNMENT OF INDIA

Results Framework Document (RFD) Annual Action Plan 2010-2011 for Scientific Research

Objectives, Functions and ongoing projects of the Survey: The Anthropological Survey of India (An.S.I.) is one of the premier research institutes established to carry out anthropological research as a sub-ordinate office under the Ministry of Culture. The genesis of An.S.I. is rooted in the Zoological and Anthropological section of the Indian Museum, which became the Zoological Survey of India in 1916. In 1945, Anthropology section of the Zoological Survey was carved out to establish the Anthropological Survey of India (An.S.I.) with Dr B.S. Guha as the founding Director. The head office was shifted from Benaras to Calcutta in 1948.

Much prior to the establishment of the An.S.I., almost since the beginning of the last century, the unparalleled diversity of the people of this ancient land has come to the notice for a study of every scholar interested in the Indian people, their culture, and social institutions. Efforts were made to understand the people, in a scientific way, not only for the furtherance of scientific knowledge per se but for its application towards the country's needs.

The Anthropological Survey of India's contribution for understanding the people of India by its coverage of the entire length and breadth of the country and its human surface in the People of India project, its publications and ethnographic films have been widely used and acknowledged all over the world.

Since its inception, the An.S.I. has been involved in studying the bio-cultural profile of Indian populations for over half a century, from its headquarters in Kolkata and seven regional centers spread over the length and breadth of the country.

Three main thrust areas of research in the An.S.I. are:

- Understanding and documenting socio-cultural aspects of the People of India including audio-visual documentation, collection and preservation of museum arte-facts.
- Understanding the physical and biological variation among the people of India through established methods and also the new technologies.
- Understanding pre-historic, paleo-anthropological and linguistic aspects of the people of India.
- Application of anthropological expertise to contemporary issues.

In order to streamline the research in An.S.I., a meeting of the National Advisory Committee was held in month of January 2010 followed by five important Sub-Committee Meetings in the months of February, May and June.

The members of the different Sub-Committees are:

Organizational Review & Restructuring:

- Joint Secretary, Ministry of Culture, Govt. of India, New Delhi
- Dr. Ajit K. Danda
- Dr. K.L. Khera
- Dr. Pradipta K. Das
- Dr. K. K. Misra
- Director, An.S.I., Kolkata
- Head of Office, Head Quarters, Member-Secretary

Cultural anthropology and Social-cultural Impact assessment:

- Prof. K. K. Basa
- Prof. Ajit K. Danda
- Prof. C.G. Hussain Khan
- Prof. Rajat Kanti Das
- Prof. R. N. Sharma
- Dr. Suresh Patil (Jt. Member Secretary)
- Dr. Umesh Kumar (Jt. Member Secretary)

Special Invitee: Prof. P.K. Misra

Bio-medical Anthropology:

- Prof. R. K. Mutatkar
- Prof P. K. Das
- Prof. Indu Talwar
- Prof. P. P. Majumder
- Prof. K. Saratchandra Singh
- Prof. Mitashree Mitra
- Dr. M. B. Sharma
- Dr. B. N. Sarkar (Member Secretary)

North East:

- Prof. K.K. Basa
- Prof. Ajit K. Danda
- Prof. A.C. Bhagabati
- Prof. Hanry Lamin
- Prof. Indira Barua
- Dr. Ramen Sen
- Dr. Zamir
- Dr. R. P. Athparia, (Member Secretary)

Networking and Communication:

- Prof. K.K. Basa
- Prof. Ajit K. Danda
- Prof. Manas Roy
- Prof. Amaresh Chakraborty
- Shri D.N. Pandey
- Shri Kanchan Mukhopadhyay (Jt. Member Secretary)
- Dr. Suresh Patil (Jt. Member Secretary)

Paleo-anthropology:

- Prof. S.R. Walimbe Prof M.L.K. Murty
- Dr. G.L. Badam
- Dr. Vasant Shinde
- Dr. S.B. Ota
- Prof. Subrata Chakarabarty
- Prof. D.K. Bhattacharya
- Shri A.R. Sankhyan (Member Secretary)

In the light of the valuable suggestions made, the Results Framework Document (RFD) for 2010-2011 has been drafted out of the points that emerged during these meetings.

Research projects/schemes initiated in the 11th plan and the ongoing schemes

A. People of India: Cultural Diversity, Intangible and Tangible Cultural Heritage, Study of Traditional Knowledge (TK)

Under this project, the traditional knowledge is recorded and studied in terms of five themes:

- Traditional knowledge involved in cultivation practices, especially the ones related to paddy cultivation, both dry and wet forms
- Traditional knowledge related to the recording of genealogies in Puri, Kamakhya, Haridwar and Madurai temple complexes
- Traditional knowledge related to fishing technology in Eastern Coast and Konkan region of the Western Coast
- Knowledge related to practice of traditional medicine

Further, it was also proposed to select one or two locations in each of the 96 eco-cultural zones and a holistic study of the situation would be initiated including the study of traditional knowledge. Owing to shortage of research personnel it could not be launched.

As far as the traditional knowledge involved in cultivation practices is concerned, the Apatani of Arunachal Pradesh were studied during July 2008 starting with a reconnoiter followed by field data collection in October and December 2008. Field trips were made again in June-July 2009. Based on this, a short film was produced depicting TK related to agriculture among the Apatani for recognition by UNESCO as World Heritage. This work would be continued as part of the research plan for 2010-11.

The second theme focuses on traditional knowledge involved in recording the genealogies in temple complexes like Puri in Orissa, Kamakhya in Assam, Haridwar in Uttaranchal, and Madurai in Tamil Nadu.

Fieldwork at Jagannath temple complex in Puri (Orissa) began in 2008 initially for about two months and then continued nearly for three months during June to September 2009. A short film on methods of recording genealogies was also produced and submitted to UNESCO for recognition as World Heritage. Final report of this study will soon be ready, after another short spell of fieldwork. Further, a report on the offering of food to the deity in Puri temple complex has also been prepared, as suggested by the hon'ble Secretary, MOC. Fieldwork for the remaining complexes would be commenced as part of the research plan for 2010-11.

The coastal fishermen in India are known for their excellence in making seafaring boats, navigating those vessels in sea with the help of some natural aids like studying the water and the sky to decide where to fish and when. Fishing activity involves a whole range of traditional knowledge regarding sea, sky, wind, types of species, and so on. This theme aims to capture the TK involved in fishing activity.

Fieldwork for the above theme has been taken up by two teams; one in West Bengal and the other in Andhra Pradesh. WB team has studied TK related to fishing activity in East Medinipur between July 2008 and February 2009, in four phases while one researcher worked in South 24 Paraganas. This part of the fieldwork is complete and the research plan for 2010-11 looks forward to fieldwork in the Konkan region which has already been initiated.

Under the theme on the study of traditional medicine, fieldwork has been done in the following places:

- Sahariya, known for their knowledge of herbal traditional medicine, were studied in a few villages of Shahbad Tehsil during the first phase and in some other villages of Kishanganj Tehsil during the second phase in the Baran District of Rajasthan.
- A team from Head Quarters studied Asur and the same team has now taken up the study of Toto community in West Bengal to understand their medicinal knowledge.
- Two researchers from the SRC, Mysore have taken up the study of Kadar and Kani in Kerala to document their medicinal knowledge. They did fieldwork for about a month and presented their findings in the workshop during May 2009. Now they have taken up the second phase of fieldwork, as per suggestions during the conference.
- Another researcher from SRC, Mysore, conducted fieldwork for about two months among the Koya in Adilabad district and presented his findings. As per suggestions, second phase of fieldwork is

now being carried out. Another researcher has taken up the study of traditional medicine among the Jenu Kuruba, Soliga and the Betta Kuruba of Mysore and Chamrajanagar districts in Karnataka.

All this work under the study of traditional medicine is scheduled to be completed during the research plan period of 2010-11.

Field work for documentation of traditional knowledge for the above five themes will continue with the engagement of research personnel of the Cultural Anthropology Section till March 2011 and would be concluded after the submission of reports.

B. People of India: Bio-Cultural Adaptations

The Survey with its mandate of understanding the bio-cultural aspects of Indian populations would continue the studies of phylogeny, community genetics and disease genes through utilization of its DNA laboratories across the country.

The following ongoing projects on Bio-Medical anthropology were undertaken among the various populations of India.

I. DNA Polymorphism of the Contemporary Indian Populations & Ancient skeletal Material:

The Survey has proposed to study the genomic variation of Indian tribes from different geographical niches with the following objectives:

- To understand the genomic variation of Indian population
- To reconstruct the evolutionary history of man in India, using molecular evidence.
- To create a database pertaining to the genomic diversity of various populations of India.
- To trace the migration history of Indian population through mtDNA and Y- chromosome studies.

Coverage:

Under this project, over 45 'Primitive' tribal populations (~ 4500 samples), including three populations from the Andaman archipelago, have so far been covered. Using the whole genome sequencing combined with multiplexed SNP typing, this study investigated the deep structure of mt DNA haplogroups of Indian populations. Presently the analysis of Y-SNPs of 32 tribal populations, to understand the paternal lineages, is under way.

Most Significant Findings:

In our Indian mtDNA genome screening, Pauri Bhuiya tribe of Indian mainland population, distributed in the state of Orissa, shares genetic similarity with the hitherto Andaman Islanders, the Jarawa, the Onge and the Great Andamanese by sharing 7 mutations of Andaman Islands, characteristic of haplogroup M31.

Efforts will be made to study eight populations from various Regional Centers under this project during the year, 2010-2011

II Community Genetics & Health (Community Genetics Extension Programme)

Keeping in view of the severity of the β Thalassaemia and Sickle cell diseases and the low level of awareness about these genetic disorders, Anthropological Survey of India has initiated a massive awareness and screening drive, as a part of the community genetics extension program, and is being presently implemented in the southern part of West Bengal and the Vidarbha region of Maharashtra. The programme's Objectives are:

- To create a Massive Awareness Development regarding Haemoglobinopathies and in particular about Thalassaemia, Sickle Cell Anemia etc.
- To facilitate Mass Screening among the high-risk target groups,

- To create a Regional/National database on the molecular heterogeneity as well as frequency distribution of Haemoglobinopathies, for future reference and monitoring

Coverage:

Under community Genetics and Health, about 72 awareness camps (40 from West Bengal and 32 from Maharashtra) were organized in various places including the schools/colleges/and villages of southern Bengal and Vidarbha region of Maharashtra. About 10,000 blood samples were screened for Thalassaemia and Sickle cell anemia and provided adequate information to the participants for their future reference as well as for monitoring these deadly diseases.

The results, under Community Genetics and Health in West Bengal, so far suggest that the frequency of β - Thalassaemia carriers and HbE are really alarming in this part of the country. Cases of other sporadic haemoglobin variants and rare β - Thalassaemia mutations were picked up for an in-depth molecular analysis.

Efforts will be made to continue this project by screening 3500 samples under this project during 2010-2011.

The subcommittee on Bio-Medical Anthropology has appreciated the efforts of the Survey so far. The subcommittee members emphasized the study on genome diversity vis-à-vis cultural/archaeological/paleo-anthropological/linguistic diversity with reference to the People of India, to continue.

The committee expressed great satisfaction with regard to the infrastructural facilities made available in the Survey, as well as for the An.S.I.'s significant contribution with particular reference to tracing the M31 lineages of the Pauri Bhuiya of Orissa and the tribes of Andaman especially the Onge and the Jarawa, in the genome diversity studies undertaken by the Survey. The subcommittee further suggested continuing this study (genome diversity) in order to trace the Austric speakers of India.

The subcommittee has also appreciated the integrated efforts made by the social scientists and psychologists in the community genetic study for the prevention of Thalassaemia and Sickle cell disease in India.

III. DNA Banking

The Survey has also created a DNA banking facilities at different regional centers in order to preserve the biological heritage of the People of India.

IV. Physical Growth and Development of Children in North-East India; A Public Health Issue:

It was decided to reorient the 10th plan National project, "Physical Growth of Adolescents as "Physical Growth and Development of Children in North-East India; A Public Health Issue" with the following objectives:

1. To investigate the ethnic and the environmental sources of variability in Physical Growth and nutritional status of children from 0 -18 years in North-East India.
2. To construct ethnic specific or pooled growth standards for the children of similar age ranges of both sexes from this region.

Under this project, data is being collected on boys and girls from birth to 21 years. Fieldwork among Angami Naga Children of Nagaland has been completed and analysis of data is in progress. Another community to be covered, in Mokokchung district of Nagaland, is Ao Naga.

V. Depression and Suicide: A Psycho-Genetic Study

This study is designed to find out the Psychological and Biological aspects of depression and the Intensity of Suicidal motivation, deemed to be present among the Depressive patients. Efforts will be made to conclude this project during 2010-2011.

Man in Biosphere and Social-cultural Impact Assessment Studies:

All the ongoing projects were discussed during the meetings of the National Sub-committee on "Cultural Anthropology", "Biomedical Anthropology" and "Paleo-anthropology". Members of the committees expressed that the respective projects on hand should be completed. However, the general consensus that emerged during the meetings was that the Survey should increasingly focus on projects relevant to contemporary problems. In this context, as proposed in the earlier meeting, the Subcommittee on "Social-cultural Impact Assessment (SCIA)" met separately and the Members discussed all issues related to SCIA. It was felt that special emphasis should be given to "Social-cultural impact assessment" of selected situations.

Accordingly, as part of the action plan for 2010-11, the emphasis will be laid on introducing "Social-cultural Impact Assessment (SCIA)" in the Survey. Social Impact Assessment endeavours to assess or estimate, in advance, the social consequences that are likely to follow from specific policy action. The benefit of SCIA is that it mitigates the impact of displacement and enhances the benefits for those affected by displacement.

Considering the importance of SCIA, it was proposed in the meeting that a workshop would be held at Kolkata in order to chalk out the modalities and further strategy for introducing SCIA in the An.S.I. In this context, it may be mentioned that a team comprising researchers from the Cultural Anthropology and Human Ecology Section of the An.S.I. has already taken up a case of "Social-cultural impact assessment" studies in Achanakmar-Amarkantak Bio-sphere Reserve on the request of Forest Department. Reports of six villages have already been submitted while the remaining reports of other 18 villages will be submitted as a part of action plan of 2010-2011.

4. Projects in Allied Sections:

Other projects in hand, in Allied Sections like Psychology would continue.

D. Paleo-anthropology section:

Regarding the Narmada Project, it may be said that the Central Narmada Valley is a preserve of the fossilised bones and Palaeolithic cultures of the Quaternary Man in stratified contexts, and has yielded the solitary human fossil evidence in South Asia. Therefore, it provides a rare opportunity to understand the evolution of man and his culture in South Asia. The paleo-anthropology section has conducted 15 months Field Explorations and trial Excavations from June 2005 to May 2009 in the entire Narmada basin from Handia to Bhedaghat, covering around 400 Km. Explorations were repeated four more times to recover more than 8000 Stone Age Implements and around 500 Vertebrate Fossil remains. The data is under analysis and the reporting of the same would be a part of the action plan of 2010-11.

Since the study of Narmada Valley is nearing completion, as a next phase, Shivalik Ranges is proposed to be taken up.

Ensuing Events:

- It is proposed to hold a conference in collaboration with the Indian Anthropological Society on the "Plural Nature of Anthropology" some time during November 2010.
- It is also proposed to hold a conference in collaboration with INCAA in February 2011.
- Golden Jubilee celebration of the Southern Regional Centre Mysore would be held as a yearlong research activity.