

Activity	Contact Name	Address	Telephone	Fax	Email	Website
<b>National SCAR Committee</b>						
	Shri. Rasik Ravindra, Chairman	Ministry of Earth Sciences, Mahasagar Bhavan, Block 12, CGO Complex, Lodhi Road, New Delhi - 110 003	(+91)-9999518129		rasikravindra@gmail.com	
	Dr. N C Mehrotra	Former Director, Birbal Sahni Institute of Paleobotany, Lucknow-226007 ,India	(+91)-522-2740470	(+91)-522-2740485	mehrotrabsip@rediffmail.com	
	Dr. Anil Joshi	Dy. Director General, Geological Survey of India, Faridabad - 121001, India	(+91)-129-2417335	(+91)-129-2417335	anil.joshi@gsi.gov.in	
	R K Sharma	Advisor, Ministry of Earth Sciences, Prithvi Bhavan, Lodhi Road, New Delhi	(+91)-11-24669516	(+91)-11-24669778	rks@nic.in; krram@yahoo.com	
	Dr. Rahul Mohan, Member Secretary	ESSO-National Centre for Antarctic & Ocean Research, Headland Sada, Goa - Pin-403804, INDIA.	(+91)-832-2525531	(+91)-832-2520877	rahulmohan@ncaor.gov.in	
<b>SCAR Delegates</b>						
<b>1) Delegate</b>	Dr. Shailesh Nayak	Secretary to Government of India Ministry of Earth Sciences, Mahasagar Bhavan, Block 12, CGO Complex, Lodhi Road, New Delhi - 110 003	(+91)-11-2462977/72	(+91)-11-24669777	secretary@moes.gov.in	
<b>2) Alternate Delegate</b>	Dr. S. Rajan	Director, ESSO-National Centre for Antarctic & Ocean Research, Headland Sada, Goa - Pin-403804, INDIA.	(+91)-832-2520876	(+91)-832-2520877	rajan@ncaor.gov.in	www.ncaor.gov.in
<b>Standing Scientific Groups</b>						
<b>Geosciences</b>						
<b>1)</b>	Dr. Anil Joshi	Dy. Director General, Geological Survey of India, Faridabad - 121001, India	(+91)-129-2417335	(+91)-129-2417335	anil.joshi@gsi.gov.in	
<b>2)</b>	Dr. N. C. Pant	Associate Professor Centre for Advanced Study, Department of Geology, Delhi University, Delhi-110007	(+91)-9953781350		pantnc@rediffmail.com	
<b>3)</b>	Dr. Thamban Meloth	ESSO-National Centre for Antarctic & Ocean Research, Headland Sada, Goa - Pin-403804, INDIA.	(+91)-832-2525622	(+91)-832 2520877	meloth@ncaor.gov.in	
<b>4)</b>	Dr. Rahul Mohan	ESSO-National Centre for Antarctic & Ocean Research, Headland Sada, Goa - Pin-403804, INDIA.	(+91)-832-2525531	(+91)-832-2520877	rahulmohan@ncaor.gov.in	

<b>Life Sciences</b>						
1)	Dr. S Shivaji	Consultant (Retd. Director Grade-Scientist G) Centre for Cellular and Molecular Biology (CCMB) Uppal Road Hyderabad 500 007	(+91)- 40 24006403	(+91) 40 27160591	shivas@ccmb.res.in	
2)	Dr. Sathyakumar	Scientist G/Sr. Professor Wildlife Institute of India P.O Box,18, Chandrabani Dehradun 248 001 Uttarakhand.	(+91)- 135 2640230	(+91)- 135 2640117	ssk@wwi.gov.in	
3)	Dr. Sarat Chandra Tripathy	ESSO-National Centre for Antarctic & Ocean Research, Headland Sada, Goa - Pin-403804, INDIA.	(+91)- 832 2525635	(+91)--832-2520877	sarat@ncaor.gov.in	
<b>Physical Sciences</b>						
1)	Prof. S Gurubaran	Indian Institute of Geomagnetism Plot 5, Sector 18, Near Kalamboli Highway, New Panel (W), Navi Mumabi, 410 218	(+91)-22-27480763/4017	(+91)-22-27480762	gurubara@iigs.iigm.res.in	
2)	Dr. Suresh Babu	Space Physics Laboratory Vikram Sarabhai Space Centre, Thiruvananthapuram - 695 022	(+91)-471-2562404	(+91)-471 2706535	s_sureshbabu@vssc.gov.in	
3)	Dr. V D Mishra	Snow & Avalanche Study Establishment Research & Development Centre Himparisar, Sector 37-A Chandigarh-160 036	(+91)-172-2699804	(+91)-172-2699970	vd_mishra@rediffmail.com	
<b>Scientific Research Program</b>						
ACE						
1)						
2)						
AGCS						
1)						
2)						
EBA						
1)						
2)						
ICESTAR						
1)						
2)						
SALE						
1)						
2)						

Activity	Contact Name	Address	Telephone	Fax	Email	web site
<b>ACTION GROUPS</b>						
1)Bipolar Action Group 2) 3) 4)						
insert others as needed						
<b>EXPERT GROUPS</b>						
1) 2) 3) 4)						
insert others as needed						
<b>SCADM</b>						
1)	Shri S Samy	Head, ICTD, National Centre for Antarctic & Ocean Research Headland Sada, Goa 403 804, INDIA	(+91)-832-2525515	(+91)-832-2520877	vssamy@ncaor.gov.in	
<b>NATIONAL ANTARCTIC DATA CENTRE</b>						
National Antarctic Data Centre of India is under construction	Shri S Samy	Head, ICTD, National Centre for Antarctic & Ocean Research Headland Sada, Goa 403 804, INDIA	(+91)-832-2525515	(+91)-832-2520877	vssamy@ncaor.gov.in	
<b>SCAR DATABASE</b>						
insert name of database for which your country has responsibility						

## A BRIEF SUMMARY OF SCIENTIFIC HIGHLIGHTS:

29 projects from 15 different premier institutes / universities of India were taken up during the said period of 2013-14. Brief highlights have been provided under subheads:

### Atmospheric & Meteorology

#### **NCAOR (Maitri)-Long term: Installation of Moveable Atmospheric Radar for Antarctica (MARA)**

MARA was installed near Maitri to understand conditions of the atmospheric structure and turbulence, in the polar troposphere and lower stratosphere. The data will help to improve and validate models of air transport, particularly in relation to vertical transport and mixing.

#### **IIG-(Maitri & Bharati)-Long term:A field atmospheric electricity**

A laboratory was established to study the probable local disturbances over the exposed land and ice sheet. Continuous monitoring of variations in H, D & Z components of Earth's magnetic Field using Digital Flux Gate Magnetometer (DFM) and Global Positioning System (GPS) was carried out for the study of Crustal deformation and Atmospheric studies.

#### **NPL (Maitri & Bharati) Long term:**

Measurements were made to study the different behavior of ionospheric parameter monitoring like bottom side, plasma density, variation of critical frequency and height of different ionosphere layers.

#### **SASE-(Maitri) Long term**

Sensors and Towers for the Automatic Weather Stations (AWSs) were installed near the NOVO airstrip during the 1st week of Dec 2013. For long term monitoring of various meteorological parameters and estimation of surface energy and mass balance studies, data was obtained from the two AWSs and >200 observations were made with Sunphotometer & Ozonemeter at Maitri on sunny days only

#### **SPL- (Bharati & Maitri)Long term**

GPS instrument was installed during the 32<sup>nd</sup> ISEA 2012 – 2013 for conducting atmospheric studies. Data is being collected on a regular basis and backed up.

#### **IMD-(Maitri)Long term**

Surface meteorological parameters were measured and the data was transmitted over the GTS for use by the weather forecasters all over the world.

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### Earth Science

#### Geology & Glaciology :

#### **SOI (Maitri )-Long term**

Seven days continuous GPS observation was carried out at Maitri to study the inter-plate movement between Indian and Antarctic plates

#### **NGRI (Maitri & Bharati)-**

Continuous GPS monitoring was done for seismotectonics and geodynamical studies

#### **NCAOR (Maitri) Long term:**

A 101 m ice core was successfully drilled at Dronning Maud Land by dedicated ESSO-NCAOR team under the Ice core drilling project; Reconnaissance survey was also done for ice-rises.

**NCAOR (Bharati) Long term:**

17 sediment cores (40 cm to 220 cm) were collected from 7 different lakes in Broknes and Grovnes using a piston coring device. The cores would help in reconstructing the past climate for Larsemann Hills. Water samples were collected from over 100 lakes and also Quilty Bay to understand its biogeochemistry.

**NHO (Maitri & Bharati)-Long term**

The objectives was to provide a published navigational chart of the waters of Maitri using soundings at various location in the India Bay. Static GPS observations for 6 hrs each were carried out at 03 locations in and around Maitri.

**GSI (Maitri & Bharti)-Long term**

Geological mapping (1:10000 scale) was carried out in the central part of the Schimacher range with the objectives of establishing tectono-metamorphic evolution of the Schirmacher range and validation of the existing information on Gondwana assembly. Two sediment cores were taken from two different lakes and grab samples were collected from a pro-glacial lake (P9). Samples were collected from paleoglacial-terraces for OSL studies.

**NCAOR (Maitri & Bharati)-Long term**

Solid phase extraction system for organic carbon analysis was set up. Thirty eight surface snow samples from the photo-biochemistry field experiment were processed for molecular level characterization studies of dissolved organic matter.

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**Biology & Environmental Sciences****BU-(Maitri) Short Term**

Water samples were collected from Lakes between Novo Station and Long Lake (L27) to identify the microalgae community present in it.

**BSI (Bharati) Short term**

Water, soil and surface sediment samples were collected from 4 peninsulas and 8 islands of Larsemann Hills. The samples will be used to identify the different algal community and also study its taxonomy.

**NCAOR (Bharati & Maitri) Long term:**

Collected water samples from 8 lakes of Grovnes and 9 from Broknes peninsula. Several physicochemical parameters were measured in the field. Surface sediment samples were collected from these lakes to perform microbial and heavy metal analysis.

**BARC (Maitri & Bharati) Long term:**

A Linux based data-logger for Digital fluxgate magnetometer system was successfully installed. The sensor cable for GPS and data cable of Maxwell antenna was secured with the help of conduit pipe. Soil sample was collected near the lake side and close to the NPL hut.

**TERI University (Maitri & Bharati)-Short Term:**

A student from TERI University participated under the Student Participation Scheme in the project titled Biogeochemical studies of blue ice regions in coastal East Antarctica with the cryosphere team of ESSO-NCAOR.