

SCAR TOKIO 2000

WORKING GROUP ON GEODESY AND GEOGRAPHICAL INFORMATION

SCAR WG GGI NATIONAL REPORT

REPORT OF CURRENT ACTIVITIES OF CHILE FOR 1998 / 2000

Comite Nacional de Investigaciones Antarticas

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The Chilean Organisations/institutes have developed working programmes to conduct research or operational work in the Antarctica, in the field of Geodesy, Photogrammetry, Cartographic, Geographical Information Systems and Remote Sensing.

INACH	-	Instituto Antartico Chileno
U.deCh.	-	Universidad de Chile.
UMAG	-	Universidad de Magallanes.
IGM	-	Instituto Geografico Militar.
SAF	-	Servicio Aerofotogrametrico de la Fuerza Aerea de Chile.
SHOA	-	Servicio Hidrografico y Oceanografico de la Armada.
Terrasat	-	Ingenieros Consultores Terrasat S.A.

Foreing organizations/institutes in co-operation

HUNIV.	-	Universidad de Hawai, USA.
GFZ	-	GeoForschungs Zentrum, Potsdam, Germany.
TUSL	-	Texas University, Saint Lois. USA.
NIMA	-	National Imagery Mapping Agency.

Other acronyms

ECA	-	Chilean Antarctic Scientific Expeditions.
KGIS	-	King George Island Geographical Information Systems

1. Field Activities.

1.1. Geodetic Surveys.

GPS Stations by fix point at King George Island - INACH, IGM, HUniv.

GPS Stations by fix point at Patriot Hills, Ellsworth Montains. Project N 162 - Geodesia Satelital GPS y Cartografia Digital en Patriot Hills, sector Heritage Monts, Ellsworths Montains. - INACH, IGM, GFZ, Huniv.

The GPS observations contribute to the network and data analysis was established for digital cartography application

4. Geographical Names.

Preparations for Gazetteer. SCAR Guidelines was considered.

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FUTURE ACTIVITIES - 2000 TO 2002.

1. Field activities.

1.1 Geodetic Surveys.

GPS Observations

For year 2002 in Patriot Hills. Permanent GPS station - 80' S and 81' W - were operated in co-operation - INACH, UMAG, IGM, HUniv. In this moment are working on electrical supply solutions.

GPS measurements was continued in XXXVII ECA in King George Island and Patriot Hills stations - INACH, IGM, UMAG, HUniv.

2. Mapping activities.

2.1. Topographic and Thematics Mapping.

Digital cartography of protected areas, specially protected areas and sites of special scientific interest on Ardley Island, King George Island and Livingston Island, under responsibility of CHILE. - INACH, SAF, IGM.

Digital Cartographic Map in Patriot Hills developed was continued during the XXXVII ECA 2001/2002 and XXXVIII ECA 2002/2003. INACH, IGM, UMAG, HUniv.

2.3. Hidrographic and Nautical Charting.

Activities of GEBCO was continued.

3. Geographic Information Systems.

3.1. GIS King George Island.

GIS was continued in XXXVII and XXXVIII ECA.

4. Geographic Name.

The co-operation with gazefter, SCAR guidelines was continued.

5. Gravimetry Surveys.

Project initial for measurements with stations gravimetric standards in traverse with link the Absolute Gravimetric Station in Punta Arenas. Points or stations of observations programmes GPS differential observations by mass balance and stream move on Patriot Hills blue ice and Sentinel streams, Heritage Montains, by glaciologic studies. Project N 158 - Glaciologia en Patriot Hills, Ellsworth Montains - INACH, UMAG, Terrasat,

GPS differential observations by control and correction of Skyway axis for security on aerial operations on Patriot Hills, Ellsworth Montains. - INACH, IGM, UdeCh, UMAG.

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All observations and measurements were made during the XXXV ECA 1998/1999 and XXXVI ECA 1999/2000. Guidelines was continued.

Support to Geodinamica del Arco de Escocia del Sur Project, for installation and operational control de Automatic Seismographics, with GPS incorporated. - INACH, U.deCh, TUSL.

1.2. Tide Gauge.

Permanent tide gauges were operated at Arturo Prat station, Greenwich Island, South Shetland Island. - SHOA.

1.3. Remote Sensing.

No works.

2. Mapping Activities.

2.1. Topographic and Thematics Mapping.

The following maps have prepared

Photogrammetric and digital maps of the Peninsula Fildes, King George Island, 1 ; 1 0.000, second version, one sheet, 1999/2000. - INACH, IGM, SAF.

First version - 1997/1998 - Peninsula Fildes maps, 1 ; 1 0,000 ft was presented in two sheets on XXIV SCAR, Concepcion Chile.

It's digital cartography have be the proposal a Data Base structure for a KGIS, including a standardised cartographic data model. Guidelines was continued.

Antarctica General Map, 1:10.000.000 - INACH, IGM - with the purpose of support Educational Ministry, includ a detailed information relative to at Antarctica.

2.2. Hidrographic and Nautical Charting.

Nautical charts areas has established for GEBCO - SHOA.

3. Geographic Information Systems.

3.1. GIS established.

With support of the Peninsula Fildes Map, 1 ; 1 0.000, INACH has established and does maitain the Project Cartografia y Sistemas de Informacion Geografica delas isles Shetland del Sur, isia Rey Jorge. Guidelines was continued.

In King George Island, Punta Spring in Danco Coast, Adelaina island and Patriot Hills GPS Station. Programs for link with Amudsen-Scoff Station in South Pole. Program will be realized from 2002/2003. - INACH, IGM, UMAG, NIMA.

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6. Other activities - In preparation.

II Congreso Ibero - Latinamericano de Científicos Antárticos, August 2003, Punta Arenas.
Organised by CNIA and hosted by UMAG and INACH.

V.Villanueva-Lopez

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July, 2000.