



Reference Frame in Practice Workshop 1A

Status of Geodetic Infrastructure in the Pacific Region – Case Studies

Rob Sarib - FIG Commission 5 Vice Chair of Administration

FIG Pacific Small Island Developing States Symposium

Policies and Practices for Responsible Governance



Fiji 18–20 September 2013

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Welcome ! Bula !



Who are the.....

International Federation of Surveyors – FIG?

**United Nations Global Geospatial
Information Management – UN GGIM?**



UN-GGIM

- Established in July 2011 by the UN Economic and Social Council (ECOSOC)
- Comprising of a committee of experts from over 200 nations, various international organisations (i.e. FIG, IAG , IHO, ISPRS) and UN agencies
- Aims / Objectives of the UN-GGIM initiative are to :
 - lead the development of global geospatial information
 - promote its use to address key global challenges
 - provide a forum to liaise and coordinate among Member States, and between Member States and international organizations
 - propose work-plans and guidelines with a view to promoting common principles, policies, methods, mechanisms and standards for the interoperability and inter-changeability of geospatial data and services.



UN-GGIM-AP

REGIONAL COMMITTEE OF
UNITED NATIONS
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT
FOR ASIA & THE PACIFIC

UN-GGIM-AP

- Establishment of a regional committee of UN-GGIM for Asia and the Pacific (ex PCGIAP) on 1 Nov 2012
- Objectives
 - Co-ordinate dialogue between national mapping, surveying, geospatial information agencies / organisations
 - Establish the Asia Pacific Geodetic Reference Frame
 - Assist with building capacity, the development of related standards, institutional frameworks, policies
 - Strategies for disaster management, 3D cadastres,
 - Strategies for access, integration and dissemination of geospatial information



UN-GGIM-AP

REGIONAL COMMITTEE OF
UNITED NATIONS
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT
FOR ASIA & THE PACIFIC

UN-GGIM-AP

- Three working groups
 - Working Group 2 on Data Sharing and Integration for Disaster Management
 - Working Group 3 on Place-Based Information Management for Economic Growth
- UN-GGIM-AP Working Group 1 on Geodetic Reference Framework for Sustainable Development
 - Co-ordinating the development of an ITRF based regional reference frame in the Asia Pacific
 - Linking other geodetic datums in the region to APREF
 - Height unification
 - Support countries



The International Federation of Surveyors

Federation of national associations;

Represents all surveying disciplines;

UN-recognised non-government organisation (NGO);

Its aim is to ensure that the disciplines of surveying and all who practise them meet the needs of the markets and communities that they serve;

It provides an international forum for discussion and development aiming to promote professional practice and standards



The FIG Profile
and the benefits of being a member
2007 - 2010



The International Federation of Surveyors is an international, non-governmental organisation whose purpose is to support international collaboration for the progress of surveying in all fields and applications.



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Membership – 120 countries, >300 000 professionals

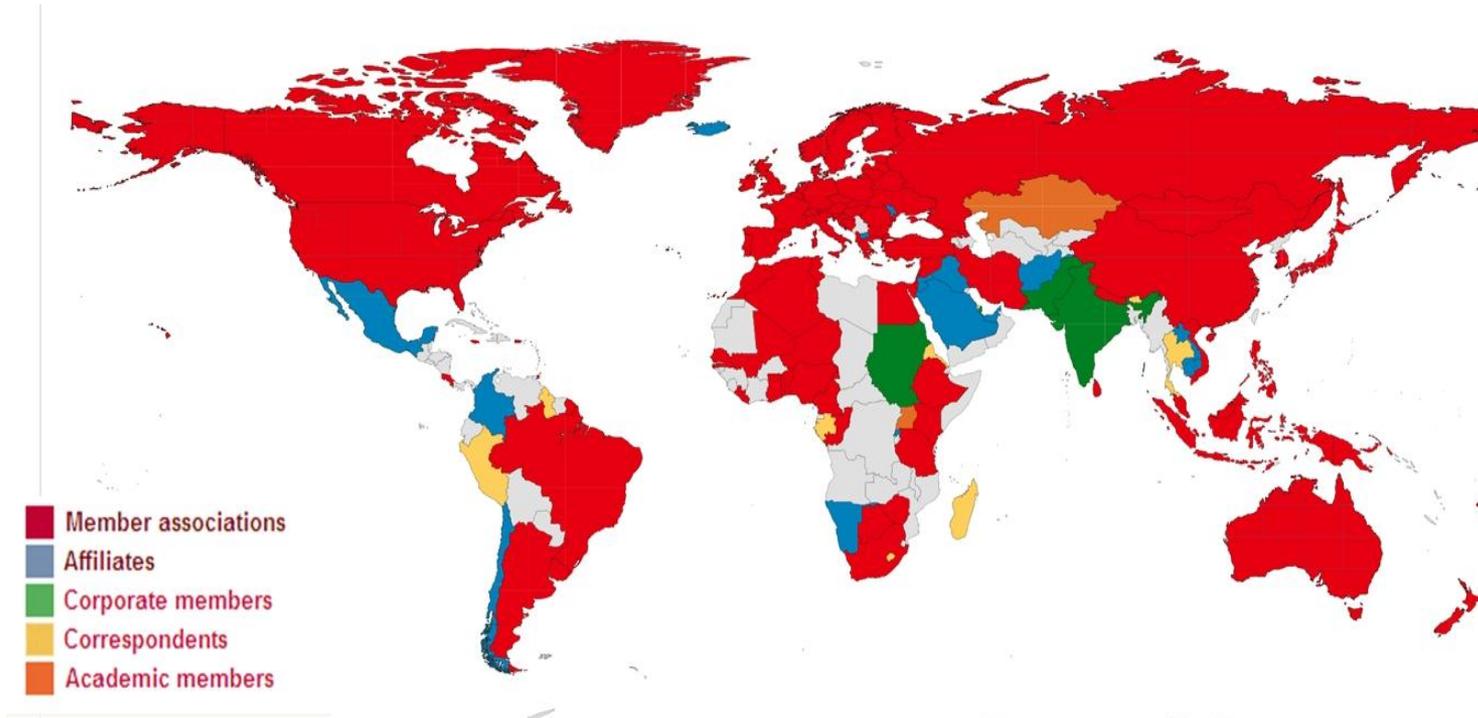


FIG Commission 5 Position and Measurement

United Nations Global Geospatial Information Management – Asia Pacific



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TEN FIG Commissions

Commission 1 – Professional Standards and Practice

Commission 2 – Professional Education

Commission 3 – Spatial Information Management

Commission 4 – Hydrography

Commission 5 – Positioning and Measurement

Commission 6 – Engineering Surveys

Commission 7 – Cadastre and Land Management

Commission 8 – Spatial Planning and Development

Commission 9 – Valuation and the Management of Real Estate

Commission 10 - Construction Economics and Management

Young Surveyors Network



The Mission of **FIG Commission 5 - Positioning and Measurement**

Focus on modern and integrated positioning technologies.

Facilitate and keep abreast of technical developments.

Foster and support applied research

Formulate and formalize collaboration with sister organizations, such as
UN-GGIM-AP, IAG

Regular participation in **FIG Events**

Source: Lilje / Sarib– SEASC Manila, June 2013

FIG Pacific Small Island Developing States Symposium

Policies and Practices for Responsible Governance



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- WG 5.1: Standards, Quality Assurance and Calibration (David Martin (France))
- WG 5.2: Reference Frames (Graeme Blick (New Zealand))
- WG 5.3: Geodetic and Positioning Infrastructure (Neil D Weston (USA))
- WG 5.4: Kinematic Measurements (Volker Schwieger (Germany))
- WG 5.5: Ubiquitous Positioning (Allison Kealy (Australia)). Joint with IAG

Source: Lilje / Sarib– SEASC Manila, June 2013

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FIG

FIG REPORT

FIG PUBLICATION
NO. 49

Cost Effective GNSS Positioning Techniques



FIG Commission 5 Publication

FIG

INTERNATIONAL FEDERATION
OF SURVEYORS (IFG)



Joint Board of Geospatial Information Societies

United Nations Office for Outer Space Affairs

Geoinformation for Disaster and Risk Management

Examples and Best Practices





Reference Frames in Practice Manual

Global, Regional, National Reference Frames and Systems – ITRS,
ITRF, GGOS

IGS – International GNSS Service

Height Systems

Standards, Quality, Best Practice

GNSS CORS Networks

Transformations / Adjustments

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FIG Commission 5 Position and Measurement

United Nations Global Geospatial Information Management – Asia Pacific





XXV FIG Congress

"Engaging the Challenges, Enhancing the Relevance"
16 - 21 JUNE 2014, MALAYSIA





Work Shop 1A Objective

To provide an overview of the state of of geodetic / survey infrastructure and development issues of each country in the Pacific Small Islands region.

PRESENTATIONS FROM

- Fiji – Mr. Asakaia Tabua
- Tonga – Mr. Viliami Folau
- Cook Islands – Mr. Vaipo Mataora
- Solomon Islands – Mr Jimmy Ikina
- Kiribati – Mr Romano Reo
- Samoa - Mr Safuta Toelau Iulio
- Vanuatu – Mr Martin Sokomanu
- Papua New Guinea – Mr. Richard Stanaway



Consider the following questions during the workshop

- Existing geodetic infrastructure and what it consists of – horizontal and vertical survey control ground marks, GNSS base stations, tide gauges ?
- What is your geodetic datum? Is it an ITRF or APREF based geodetic datum.
- Status of your surveying capacity, that is level of knowledge, resources, experience, equipment, software etc. ?
- What land information datasets are linked to your geodetic datum?
- What geodetic or positioning services are you providing or would like to provide?
- What are your issues or impediments to developing geodetic or positioning infrastructure?
- How can these issues be solved and what do you need?