Integrated Global Observing Strategy (IGOS)
Guidance for publishing Theme Reports

Introduction

The following pages are intended to provide simple guidance to the writing and formatting of the IGOS theme reports.

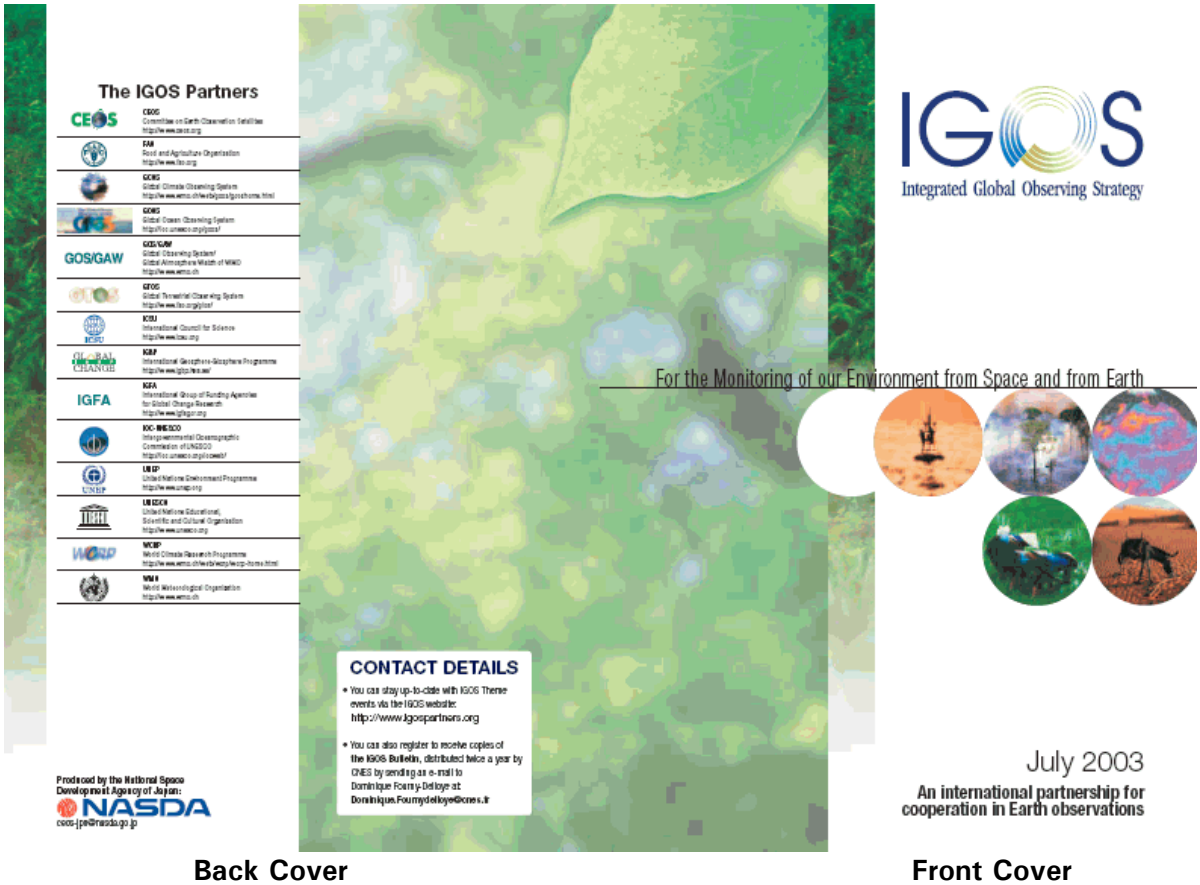
Templates for Covers

All Theme reports should have covers that follow the design of the IGOS brochure July 2003 edition, see below.

Front cover
The title of the report should be placed on the left hand side of the front cover. **An image that identifies the theme should wrap around from front to back.** The right hand side should remain unchanged except that the round graphics can be replaced with ones that are relevant to the theme. The text "For the Monitoring of our Environment and Space and From Earth" should be maintained.

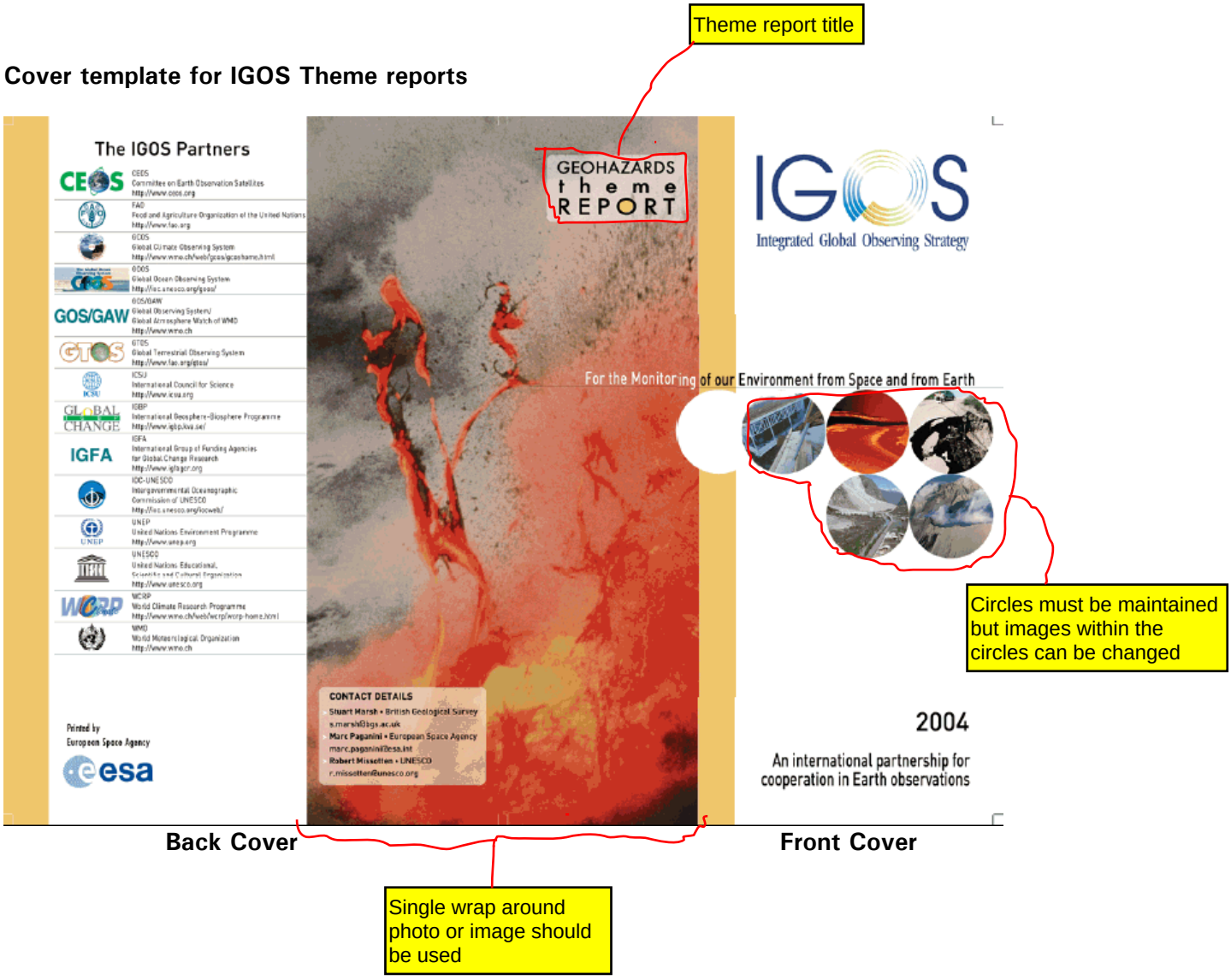
Back cover
The back cover is maintained as in the IGOS brochure but includes the Theme graphic elements. In the "Contact details" add the main contact institute and the website address of the theme if available. At the bottom of the page add the institute that printed the report (e.g. Printed by the European Space Agency).

Cover of the IGOS brochure



Back Cover **Front Cover**

Cover template for IGOS Theme reports



Pointers

1. Maintain exact layout of the IGOS brochure, i.e. image dimensions, band widths, position of text.
2. Carefully check that IGOS partners list is formatted exactly the same to the IGOS brochure.
3. Remember to include the text “For the Monitoring of our Environment from Space and from Earth” on the front cover.
4. At the bottom of the right column on the front page include the year of publication and the text “An international partnership for cooperation in Earth observations”.
5. Images and additional information can be requested from the IGOS Secretariat (rio.tanabe@fao.org).

Preface

Example of the preface that should be used. The last paragraph should be modified to reflect the theme report being published.

PREFACE

The Integrated Global Observing Strategy (IGOS) is a partnership of international organizations that are concerned with global environmental change issues. It links research, long-term monitoring and operational programmes, bringing together the producers of global observations and the users that require them, to identify products needed, gaps in observations and mechanisms to respond to needs in the science and policy communities. Its principal objectives are to integrate satellite, airborne and in-situ observation systems.

The IGOS partners are comprised of the Global Observing Systems (GOS), the International Organizations which sponsor the Global Observing Systems, the Committee on Earth Observation Satellites (CEOS), and International Global Change Science and Research programmes.

The IGOS Partners recognise that a comprehensive global earth observing system is best achieved through a step-wise process focused on practical results. The IGOS Themes allow for the definition and development of a global strategy for the observation of selected environmental issues that are of common interest to the IGOS Partners and to user groups. The current IGOS Themes include the Oceans, the Carbon cycle, Geohazards, the Water cycle, and a Coral reef sub-theme.

(next two paragraphs to be modified according to theme).The GeoHazards IGOS theme was initiated in 2001 by the National Oceanic and Atmospheric Administration (NOAA), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), CEOS and the International Council for Science Union (ICSU) in Paris. An ad-hoc Working Group was formed, chaired initially by the International Institute for Geo-Information Science and Earth-Observation (ITC) and then by the British Geological Service (BGS), and co-chaired by the European Space Agency (ESA) and UNESCO.

The proposal to develop the theme was approved by the IGOS Partners at their 9th Plenary in June 2002 and a Theme Team was set up. With the support of a community of more than 200 people worldwide who expressed interest in this initiative, a draft report was submitted to the 10th IGOS Plenary in June 2003. Following an international peer review during summer 2003, the present Theme report was approved for implementation by the IGOS Partnership in November 2003.

Further information on IGOS can be obtained from: http://www.igospartners.org.

The GeoHazards theme report is available from: http://dup.esrin.esa.it/igos-geohazards/

Inquiries to the IGOS GeoHazards theme can be sent to: igos@esa.int.

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Template for internal pages

Internal pages should have a design similar to the Geo-hazards theme report. In particular, two columns of text per page, similar font type and size, a top header with title in light grey. The Geo-hazards report format can be seen below or downloaded from the following link: www.fao.org/gtos/igos/index.asp .

Internal pages for an IGOS Theme report

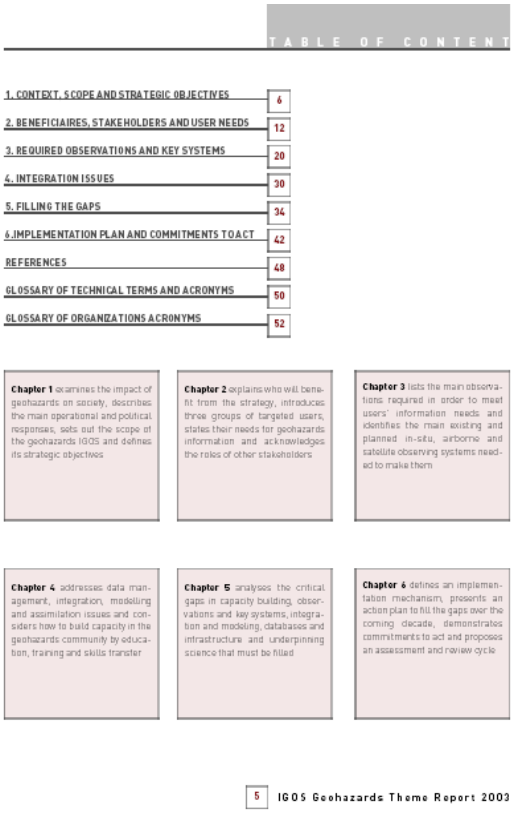

TABLE OF CONTENT

Chapter 1 examines the impact of geohazards on society, describes the main operational and political responses, sets out the scope of the geohazards IGOS and defines its strategic objectives

Chapter 2 explains who will benefit from the strategy, introduces three groups of targeted users, states their needs for geohazards information and acknowledges the roles of other stakeholders

Chapter 3 lists the main observations required in order to meet users' information needs and identifies the main existing and planned in-situ, airborne and satellite observing systems needed to make them

Chapter 4 addresses data management, integration, modelling and assimilation issues and considers how to build capacity in the geohazards community by education, training and skills transfer

Chapter 5 analyses the critical gaps in capacity building, observations and key systems, integration and modeling, databases and infrastructure and underpinning science that must be filled

Chapter 6 defines an implementation mechanism, presents an action plan to fill the gaps over the coming decade, demonstrates commitments to act and proposes an assessment and review cycle

Contents page

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Every year thousands of people are killed by volcanic eruptions, earthquakes, landslides and subsidence. They are one of the main natural causes of damage to human settlements and infrastructures. They severely disrupt the economic life of many societies. As human population increases, habitation on hazardous land becomes more common and the risks posed by these hazards increase. The need to observe their behavior, understand them better and mitigate their effects becomes ever more urgent. This is clear in the response of the international community and is the driver behind the proposed strategy. The strategic objectives are to build a global capacity to better deal with geohazards, deliver the necessary observations, improve the integration of data and systems, and promote the take-up of best practice worldwide.

A - Piton de la Fournaise – La Réunion – Eruption November 2000 (courtesy of T. Staudacher (IPGP/EOS)P)
B - Rock Slide in Switzerland (courtesy of FOWG).
C - Collapsed houses in the town of Rainal, in the epicentral region of the Gujarat earthquake (courtesy of USGS).

GEOHAZARDS' IMPACTS

Geohazards such as earthquakes, volcanic eruptions, landslides and subsidence inflict an enormous cost on society. Every year thousands of people are killed by volcanoes, earthquakes and landslides; UNEP on its GeoData portal reports that more than 26,000 have died in volcanic disasters between 1975-2000. The death toll of the 1976 earthquake in Tangshan, China alone was 242,000. Yet this is only part of the toll, for every life lost, many more are injured, or lose their homes or livelihoods; landslides in Bolivia in 1994 affected 165,000 people. A major disaster disrupts the economic life of a society for years or even decades. Even where loss of life is avoided, geohazards damage infrastructure, destroying roads, railways, buildings, airports, pipelines, dams, power grids and many other structures. The cost of these events is billions in any currency. Whilst the cost in absolute value is higher in developed countries, the cost in terms of Gross National Product (GNP) is far higher in the poorest, developing countries.

The damage from the Mount St. Helens eruption in 1980 was US$1 Billion (Elling, 1984). Consequently, private organisations must exposed to these risks seek to insure against them at an additional cost that is itself in the billions. The United Nations (UN) has established that the total costs of natural disasters as a whole have risen 10 fold in the past 40 years. The principal driver is the increase in human population and a consequent increase in the intensity of development in hazardous areas, such as on steeper slopes and along coastal zones. Geohazards therefore pose an increasing risk to society that can only be reduced by developing a better understanding of the occurrence and behavior of the hazards.

Volcanoes and volcanic eruptions have captured the imagination of the human race for many centuries. In earlier times, eruptions caught the local population by surprise and often caused great loss of life, in addition to inflicting material damage on nearby areas that lasted for decades. Even today, with the flood of other news served up daily, there is a ready audience for reports of any volcanic activity. This shift from regarding volcanic eruptions as completely unpredictable and terrible events, to viewing them as one of nature's foremost made-for-television spectaculars, reflects in part the increasing success of volcanic scientists in interpreting signs of volcanic unrest and communicating the risk to local authorities and the general public. Complacency is dangerous, however. Important aspects of volcanic activity remain poorly understood. Many active volcanoes in inhabited areas are inadequately monitored. Furthermore, the increase in population worldwide means that both the number of people and the value of infrastructure sited close to active volcanoes are increasing. Recent examples include: El Chichon (Mexico) which was completely unmonitored prior to 1982 when it erupted, killing 1900 people and devastating the surrounding area for a decade; and Nyiragongo (Congo) where over 70 people were killed by fast-moving lava flows in 1977 (Simkin and Siebert, 1994). Nyiragongo was known to be poorly monitored, and was identified as a Decade Volcano under the UN sponsored International Decade for Natural Disaster Reduction (IDNDR). Nevertheless, 25 years later the January 2002 eruption of Nyiragongo killed 147 people and wiped out the center of Goma, a town of over half a million people. Evidence for increased exposure to volcanic hazards includes a steady increase in the number of eruptions causing fatalities over the last 500 years.

Text page