International Society for Photogrammetry and Remote Sensing Internationale Gesellschaft für Photogrammetrie und Fernerkundung Société Internationale de Photogrammétrie et de Télédétection



# STRATEGIC PLAN

JULY 2010

ISPRS Strategic plan, July 2010

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## **Executive Summary**

The ISPRS Strategic Plan, approved in 2000, requires review and revision. This has been done for the occasion of the ISPRS Centenary, marked by a celebration event in Vienna on July 4<sup>th</sup> 2010. ISPRS has developed significantly since 2000, guided by the approved strategy. New science has been recognised and embraced. Collaboration with other organisations has increased significantly. A key advance has been the recognition of the requirement for ISPRS to relate its activities to the needs of society, and to work with decision makers to achieve this aim. This Plan defines the mission of ISPRS:

...... to advance the photogrammetry, remote sensing and spatial information sciences through international cooperation in research, development and education for the benefit of society and for environmental sustainability.

The vision is for ISPRS to be the foremost scientific society in its field and for the Society to speak for workers in the field and provide the necessary resources to develop the field.

The Plan sets out four components of the strategy. The first is to define the science which is within the scope of ISPRS and in line with the vision. The second is the core mission: to advance the sciences of photogrammetry, remote sensing and spatial information sciences. The third is how the vision is communicated to the spatial information community and to the general public. The final component is how ISPRS is organised and administered to implement the vision. The plan sets out these components in detail and proposes methods of implementation. The new Strategic Plan of ISPRS will position the Society in the best place to work with the public and the science community to ensure that the role of imagery is understood and that the available data is used to the best advantage for all of society. Implementation of the strategy will produce an efficient, professional organisation, ready to meet the challenges of changes to the environment, rapidly developing information and communication technologies and a society which is demanding spatial information to satisfy new demands.

### 1. Background

#### 1.1. 2000 Strategic Plan and the need for a new plan

In 2000, at the Amsterdam Congress, the ISPRS General Assembly approved a strategic plan for the 21<sup>st</sup> century and, during the following eight years, Council worked to implement that Plan. This has resulted in a Society which is much more outward looking, and which can demonstrate many successes in promoting photogrammetry, remote sensing and spatial information sciences. Laser scanning from the air and from the ground has developed significantly since 2000 and ISPRS is acknowledged as the international body which supports research and development in this area. ISPRS is also recognised as the organisation whose members develop methods for accurate mapping from satellite data and for the development of accurate 3D city models from airborne data. The promotion of spatial data by Google<sup>TM</sup> and Microsoft<sup>®</sup>, for example, has brought photogrammetry more into the public eye than ever before and the efforts of both companies have been facilitated by scientists who have also been active in ISPRS. The Society has developed strong links with United Nations bodies such as The Committee on Peaceful Uses of Outer Space (COPUOS), The Committee on Development Information, Science and Technology (CODIST) and the Regional Cartographic Conferences; we have established The ISPRS Foundation, which supports science initiatives and travel to conferences for students and scientists mainly from less developed countries. In order to promote student activity within ISPRS, we have also established a thriving ISPRS Student Consortium.

In 2007, Council started planning for the centenary of ISPRS, and decided that it was appropriate to review the 2000 strategic plan. The foundations which had been laid by that plan still hold today but, in this rapidly developing world, the scope and applications of the sciences of ISPRS have changed radically. Satellite sensors are better and much more accessible; lidar and radar are now commonplace; remote sensing science has developed and remotely sensed data is in widespread operational use. The internet has revolutionised communications and, more importantly, offers new challenges for providing education and computing, such as e-learning and cloud computing; the easy availability of spatial data on the web also challenges us to provide accurate, up-to-date data for use by non-professionals. New organisations have been established and the attitudes at international policy level have changed; it is now accepted that science must demonstrate a benefit for society and projects such as the Millennium Development Goals and the Global Earth Observing System of Systems (GEOSS) demonstrate this. The Group on Earth Observation (GEO) is recognised as a key player by many nations, especially the G8 countries. The role and status of national

mapping agencies and commercial companies have changed: there is much more emphasis on efficiency and value for money, and these organisations also have to face the challenges of new means of information delivery and place less emphasis on research into the basic science of creating spatial products. New markets have opened up, such as presenting spatial data on the internet with location based services, animation, and recording and presenting cultural heritage. The central role of imagery and derived products in disaster management and homeland security has become established, complementing its traditional central place in defence. These must be recognised and brought into the community of ISPRS.

ISPRS needs to review its role in this new society and to ensure that it is organised to meet these challenges and to be recognised as the premier organisation to collect and manage spatial information.

## 2. The ISPRS Mission and Vision

#### 2.1 The Mission

Photogrammetry and Remote Sensing is defined in the ISPRS statutes as "... the art, science, and technology of obtaining reliable information from non-contact imaging and other sensor systems about the Earth and its environment, and other physical objects and processes through recording, measuring, analysis and representation". Photogrammetry and remote sensing is therefore an important element of the spatial sciences and the scientific activities of ISPRS include spatial information systems. To cover all of these activities the mission of ISPRS can be stated as:

The Mission of The International Society for Photogrammetry and Remote Sensing (ISPRS) is to advance the photogrammetry, remote sensing and spatial information sciences through international cooperation in research, development and education for the benefit of society and for environmental sustainability.

#### 2.2 The Vision

- > The overarching vision of ISPRS is that:
  - ISPRS will be the foremost scientific society in the field of photogrammetry, remote sensing and spatial information sciences;
  - ISPRS will be the primary society in developing successful applications from scientific results in traditional and new areas;

- the voice of ISPRS will be heard in meeting environmental and societal challenges, from galactic phenomena to the microscopic;
- ISPRS will be the primary provider of educational resources and capacity building to increase public understanding and use of spatial information and the associated technology, and to ensure an ongoing supply of trained scientists in photogrammetry, remote sensing and spatial information sciences.
- > Outcomes of the strategy of ISPRS will result in:
  - reliable and interoperable spatial information which is available, accessible, and routinely used;
  - o accessible tools to use with spatial information;
  - citizens relying on the availability of persistent and ubiquitous spatial information and a thriving spatial information marketplace;
  - coordinated policies which ensure enhanced access to current and historic data;
  - partners from government, NGOs, academia and commerce and from different regions working collaboratively with a common set of goals, procedures, standards, and data models;
  - incentives to ensure cost-effective initiatives, continuous progress, and innovation;
  - o partnership and collaboration with other societies;
  - new technologies that are embraced and made accessible to the global community;
  - the value of spatial information being so well understood globally that the development of this resource is easily and continuously sustained;
  - students and young professionals globally aware of the benefits of spatial sciences;
  - a skilled and educated community placed to exploit the full potential of spatial information, and related resources, to benefit society;
  - the exchange of knowledge on spatial sciences and related resources being facilitated through mobility of scientists and students on a global scale.
- > ISPRS will be organised to create a society which:
  - o communicates effectively with all members and with society in general;
  - supports young scholars from around the world and enhances global access to education on spatial sciences;
  - o encourages interchange between disciplines;
  - fosters scientific rigour, innovation and intellectual advances in the spatial information sciences;

- o promotes diversity;
- o is transparent, accessible and open to all;
- o is environmentally responsible.

## 3. The Strategy

#### **3.1.** Key components

There are four components to the strategy to implement the vision:

- > to define the science which is within the scope of ISPRS and in line with the vision;
- > the core mission: to advance the photogrammetry, remote sensing and spatial information sciences;
- > how the vision is communicated to the spatial information community and to the general public;
- > how ISPRS is organised and administered to implement the vision.

The following sections outline the key strategies which are required.

#### **3.2.** The science

The scope of science within ISPRS is wide and any definition should be flexible. The key phrase is 'information from imagery' but, in the digital age, imagery includes 3D point clouds from lidar scanning, range data from synthetic aperture radar and other new forms of data. An understanding of the physical processes which generate remotely sensed data is also important and our science includes the processing and display of data. Within this range ISPRS should:

- maintain expertise in the core disciplines of photogrammetry, remote sensing, and analysis, management and presentation of spatial data;
- use core disciplines in applications such as disaster management, health, cultural heritage and maintaining a sustainable environment;
- develop interest in key international issues such as the Millennium Development Goals and climate change;
- work with other disciplines, such as computer vision and pattern recognition, particularly using close range photogrammetry and optical 3D measurements, robotics and navigation;
- > make use of new techniques such as cloud computing and sensor webs.

### **3.3.** Advancing the science

The key strategies required to advance the sciences of ISPRS are:

- ensure that ISPRS conferences present only high quality science and technology in the most effective manner;
- > promote and operationalise the use of imagery to solve global issues;
- engage with developing countries, especially in capacity building and student activities;
- develop strategies with academicians, manufacturers and users in new markets;
- ▶ broaden membership to other disciplines and attract players from new markets.

#### **3.4.** Communicating with others

In order to promote the sciences of ISPRS, the Society should:

- establish ISPRS as the recognised voice of photogrammetry, remote sensing and spatial information sciences through development of relationships with key international bodies;
- > improve electronic and printed forms of communication;
- > improve external visibility and the image of the Society;
- develop a consistent strategy for promoting ISPRS;
- > expand membership in all categories.

#### 3.5. The organisation and administration of ISPRS

In order to accomplish the mission, ISPRS should review its current administrative structure, together with the sources of income, and develop a business model which is workable, given the nature of ISPRS structure and membership, and which can be funded. The key issues are to:

- improve financial viability;
- ➤ improve the administration of ISPRS.

### 4. Implementing the vision – key actions

The strategies set out in Section 3 require detailed actions in order to be implemented. The following table sets out the actions required and methods by which they can be implemented.

Method

#### THE SCIENCE

## Strategy: maintain expertise in the core disciplines of photogrammetry, remote sensing, and analysis, management and presentation of spatial data

Promote the importance of spatial data Use international fora and conference addresses to communicate the message.

# Strategy: use core disciplines in applications such as disaster management, health, cultural heritage and maintenance of a sustainable environment

#### develop interest in key international issues such as working towards the Millennium Development Goals and climate change

Work with interdisciplinary	Take part in international projects and task groups such
organisations such as ICSU	as ICSU Regional Offices and GEO.

Establish joint working groups with other organisations.

#### Strategy: develop interdisciplinary research in all areas

Establish interdisciplinary	Work through groups such as the Joint Board of
working groups	Geospatial Information Societies (JBGIS), the ICSU
	Geounions, IEEE and CVPR to identify common
	activities and set up joint working groups.

#### Strategy: make use of new techniques such as cloud computing and sensor webs

Establish working groups to	TCPs to report to Council on new topics and
address new topics	recommend new WGs.

#### **ADVANCING THE SCIENCE**

## Strategy: ensure that ISPRS conferences present only high quality science and technology in the most effective manner

Introduce a double blind review process for Congresses and Symposia

Publish papers as peer reviewed Review current publications and set up new ones.

#### Method

#### Strategy: promote and operationalise the use of imagery to solve global issues

Promote research and development which addresses societal benefit areas	WGs to address science input to societal benefit areas and link to the work of GEO, ISO and OGC <sup>®</sup> ; particularly GEO tasks, with active participation.
	Insert requirements into WG ToRs.
	TCPs to make contact with GEO contact person.
Operationalise ISPRS initiatives in disaster and health	Produce publications, capacity building and training materials in collaboration with JBGIS, UN SPIDER and ICSU.
Raise awareness of the use of image data for societal benefit	Add case studies to Google <sup>TM</sup> , Bing Maps and similar web services demonstrating application of image data.
Promote use of GI databases and geosensor networks to other scientific communities addressing	Identify groups working in climate change; collaborate with these groups through joint workshops and joint projects.
global climate change	Make use of data from GEONETcast.
	Place review articles in book series.
	Relevant working groups to prepare information sheets on available datasets and their application.
Strategy: engage with develop	oing countries
Establish student scholarships and exchanges	Explore methods of expanding funding such as The ISPRS Foundation and partnerships with industry.

Develop funding programmes for international collaboration	Compile directory of funding opportunities and register of people interested in collaboration.
Expand training/capacity building	Hold workshops, training sessions and tutorials.

in developing countriesHold conferences in developing<br/>countriesRevise guidelines and encourage TCPs to hold WG and<br/>Commission symposia in developing countries.

Work with other societies, especially through JBGIS.

Action	Method
Extend curriculum development activities for developing countries to allow mobility of students and teachers; create new models for new conditions.	First assess needs.
	Work with UN, CEOS, ITC and others already working in this area.
	Engage with University of Mississippi curricula, UCGIS GI Science and Technology Book of Knowledge and ITC.
	Develop low cost methods and resources.
Strategy: strengthen geospati	al education globally

#### strengthen geospatial education globally Strategy:

Work with institutions of higher Set up a working group within Commission VI to bring together educators to formulate plans to promote spatial education to promote programmes in spatial science. science education.

Work with other organisations to develop greater recognition of qualifications in spatial science.

Engage with current activities on curriculum development and accreditation.

#### develop strategies with academicians, manufacturers and users from new **Strategy:** markets

Develop and improve contacts with scientists, manufacturers and	Develop sponsorship possibilities and more attractions for Sustaining Members.
players in new markets	Optimise exhibitions at inter-Congress Symposia.
	Compile an ISPRS list of consultants to help companies enter new geographical markets.
	Exchange interesting articles with other academic journals.
Identify and reach out to groups to which ISPRS wants to talk, e.g.	Increase communication with national societies throughout the world.
commercial companies, youth (university and high school	Provide financial support to students to attend meetings.
students), political level (government decision makers, UN, World Bank), other societies	Provide mentorship for students; liaison for students in each region and each country.
(including high-level ones such as GEO, GEOSS, CEOS), space agencies, media, general public	Provide identified groups with appropriate promotional materials, including educational materials.
	Make full use of existing networks, e.g. ITC alumni and similar university networks.

Action	Method
Attract and retain Sustaining Members	Link Sustaining Members to WGs and offer publicity on WG websites and in workshop proceedings.
	Organise showcase sessions at Congresses.
	Include links in programmes and Archives to websites.
	Offer discount on two or four year membership.
	Offer facilities for user group meetings.
Increase involvement of NMAs with ISPRS	Identify areas of interest to NMAs through NMA fora at conferences e.g. updating databases, intelligent services, benchmarking, cyber infrastructure, security.
	Instruct WGs which cover areas identified to establish contact with NMAs and encourage members from NMAs to join.
Provide expert advice to users	Establish list of experts and hold small workshops on selected topics.
Establish an easily accessible and well promoted repository of data	Collect data from WG projects, especially benchmarking activities and place on server for easy access.
sets	Work with organisations such as EuroSDR which have projects based on useful datasets.
Strategy: broaden membership to other Earth observation disciplines; attract	

## Strategy: broaden membership to other Earth observation disciplines; attract players from the new markets

Outreach to organisations in new	Set up task force to identify new markets and to
markets	approach them.

### COMMUNICATING WITH OTHERS

#### Strategy: establish ISPRS as the recognised voice of photogrammetry, remote sensing and spatial information sciences through development of relationships with key international bodies

Review membership of<br/>international bodies (UN, ICSU,<br/>GEO, CEOS)Promote ISPRS in these bodies, making best use of<br/>resources available such as publicity material,<br/>statements to meetings and personal contacts.

#### Strategy: improve electronic and printed forms of communication

Increase access to ISPRS meetings Use 'virtual sessions' and webinars.

Action	Method	
Improve publication standards to comply with ISI and Scopus or	Raise awareness of importance of peer review within ISPRS.	
change to abstracts only	Introduce two lines for paper submission at every ISPRS event: one with rigorous double-blind review and one with abstract review.	
	Work to include ISPRS book series in ISI and Scopus.	
Consider publishing new open access journals	Review current ISPRS publications and recommend new publications.	
	Consider establishing online journal.	
Strategy: improve external visibility and image of the Society		
Improve the website	Use a more dynamic approach to dissemination of information, perhaps phasing up to blog/wiki or other participatory capabilities.	
	Introduce a pressroom and vibrant news section to website.	
	Compile documentation of success stories by members and TC activities and post on the web.	
	Develop digital materials including Powerpoint <sup>®</sup> files and videos which introduce the scientific and technological advantages of ISPRS.	
Increase visibility of ISPRS	Brand ISPRS events and expand advertising to new magazines and newsletters.	
Promote the historical developments of photogrammetry and remote sensing	Publish popular articles on historical topics of general interest.	
Issue press releases on a regular basis	Set up a PR office and/or assign PR officer who mainly thinks and works for the promotion of ISPRS	
Develop a marketing plan	Use the web and perhaps a consultant to provide a strawman, then fill in the blanks	

#### Method

Strategy: expand membershi	p in all categories
Stimulation of formation of national and regional societies	List countries which need or want help, contact them and find out their needs; work out and implement a plan to support them.
	Organise ISPRS tutorials or seminars at the symposia of national and regional societies.
	Become more involved in regional events and publications, e.g. members' journals.
	Use conferences to bring together groups from different countries and provide toolkits to show them how to form a society and join ISPRS.
	Use ITC and other alumni networks; appoint mentors to facilitate this activity.
Motivate more women to take part in the Society and encourage Members to present women as	Publish articles directed at women: special issue of ISPRS Journal focused on women authors; <i>Highlights</i> article on women in ISPRS.
candidates for Council and TCPs	Collect short articles from international women active in ISPRS activities to demonstrate cultural differences and how women have handled these.
	Facilitate attendance of women at conferences by providing daycare facilities and scholarships for women.
	Facilitate networking of women through web-based networks for women.
	Connect young women scholars with women who have experience of balancing work and family responsibilities.
	Initiate a mentor program for women students and young professionals.
Review and increase benefits of membership	Place data and teaching materials on webpage which is only available to members.
	Establish an employment and scholarship register.
	Develop monthly eNews bulletin.
Introduce individual membership	Study other individual membership schemes and develop for ISPRS.

#### Method

Connect national student	Appoint a liaison officer from ISPRS WG officers for
organisations with ISPRS student	every country, who should bring students into ISPRS
consortium	activities and student consortium.
Create student presence at conferences	Include student sessions and involve student consortium.

#### ORGANISATION AND ADMINISTRATION

#### Strategy: improve financial viability

Increase internal income	Raise subscription fees regularly, perhaps according to some scheme linked to GNP, or some other appropriate rules.
Increase income through donations from foundations, Sustaining Members, private	Seek grants for specific purposes, e. g. travel grants for students or project money.
companies etc.	Solicit continuing support from Sustaining Members beyond the Congress years.
	Establish local endowments.
	Seek endowed prizes or awards from private companies such as "Company X GIS Award".
	Provide easily understood guidelines to attract commercial companies and Sustaining Members.
Increase income by selling	Sell advertising in IJPRS, ISPRS Archives and online.
services	Organise seminars or workshops with a registration fee on ISPRS related state-of-the-art technologies.
Increase funds by spending less	Make use of knowledgeable retired people working from home.
	Conduct meetings by video and teleconferences.
Increase income from commercial exhibitions	Introduce the concept of a virtual exhibition to allow exhibitors to show their posters and materials without travelling to the exhibition site.
	Work with Sustaining Members to see if they would be willing to sponsor or pay for anything else at Congresses and Symposia.

#### Method

#### Strategy: improve the administration of the Society

Simplify the rules of the Society, simplify the procedures and cut down on administration	Review current practice and make recommendations for more efficient operation. Consider videoconferencing/e-mailing, permit decisions by responsible individuals and reduce committees.		
Increase support to carry out strategies for outreach, recruitment, marketing and other activities which need continuity, such as maintaining records, historical documentation, fund raising, book keeping and writing minutes (releasing SG for more creative activities)	Appoint a permanent secretariat. Look at other methods, such as assistant to SG, using a retired person. Outsource publications.		
Provide support for organisation of meetings	Look at employing an event organiser, or central provision of software to support meetings. <i>Note: ISPRS can take a bigger slice of income; TCPs</i> <i>can concentrate on scientific content of Congresses and</i> <i>Symposia.</i>		
Simplify commission and committee structure	Review current structure. Note: There is no clear indication of the need for radical change, but Commissions, ISAC and IPAC need to be reviewed, and the need for additional committees should be considered.		
Rationalise meeting programme and reduce number of meetings	Set up task force to review guidelines and current practice. Note: Structure of four-year Congresses and two-year Symposia works well, but the task force should consider how to implement joint symposia and joint bids for a commission from two members; consider more, large, joint workshops and small workshops of experts and consider partnering with other societies.		

The implementation of the actions set out above needs to be supervised by Council. Appendix 3 sets out an implementation plan. In order to effect this it is recommended that three task forces be set up to consider and report on Marketing, Funding and Efficiency, and Widening Participation. These Task Forces should report to the General Assembly in 2012 with recommendations. Council should review progress on implementation at least once a year.

## 5. Conclusions

ISPRS is entering an era in which spatial sciences will play an increasingly important role in preparing information for the general public and in which the public will demand information which is fit for purpose. At the same time, scientists will need to work together to tackle the problems which face society in both the developed and developing world. The new strategic plan of ISPRS will position the Society in the best place to work with the public and the science community to ensure that the role of imagery is understood and that the available data is used to best advantage for all society. Implementation of the strategy will produce an efficient, professional organisation, ready to meet the challenges of changes to the environment, rapidly developing information and communication technologies and a society which is demanding spatial information to satisfy new demands.

## Appendices

## Appendix 1 – Glossary of acronyms

CEOS	Committee on Earth Observation Satellites
COPUOS	United Nations Committee on Peaceful Uses of Outer Space
CODIST	United Nations Economic Commission for Africa Committee on Development
	Information, Science and Technology
CVPR	IEEE Conference on Computer Vision and Pattern Recognition
GEO	Group on Earth Observation
GEOSS	Global Earth Observing System of Systems
ICSU	International Council of Science
IEEE	Institution of Electrical and Electronic Engineers
IJPRS	ISPRS Journal of Photogrammetry and Remote Sensing
IPAC	ISPRS International Policy Advisory Committee
ISAC	ISPRS International Science Advisory Committee
ISI	Institute for Scientific Information
ISO	International Standards Organisation
ITC	International Institute for Geo-Information Science and Earth Observation
JBGIS	Joint Board of Geospatial Information Societies
NGO	Non Government Organisation
NMA	National Mapping Agency
OGC	Open Geospatial Consortium
SPIDER	United Nations Platform for Space-based Information for Disaster Management and
	Emergency Response
ТСР	ISPRS Technical Commission President
UCGIS	University Consortium for Geographic Information Science
WG	ISPRS Working Group

### Appendix 2 - The process of developing the plan

In order to develop the plan a Strategy Review Committee was set up. This committee met on two occasions to discuss the best way to develop a new plan. It was decided to carry out a survey amongst people active in ISPRS and a few from other cognate organizations, and to perform a SWOT analysis on the results. This was done and in March 2009 the committee held a two-day meeting to analyse the results of the SWOT analysis and to prepare a first draft of the new strategic plan. This process was facilitated by Kass Green, former president of ASPRS, who had carried out similar exercises with ASPRS and other organisations. The draft plan was refined and discussed by Technical Commission Presidents, ISPRS Council and other individuals active in ISPRS during September 2009.

#### Members of the Strategy Review Committee

Kohei Cho, President of Commission VI, 2004-2008, Tokai University, Japan.

Ian Dowman, First Vice President of ISPRS, University College London, UK. (Chair).

Christian Heipke, Liebnitz University of Hannover, Germany

Marguerite Madden, President of ISPRS Commission IV, 2008-2012, University of Georgia, USA.

Stewart Walker, BAE Systems, USA.

Tsehaie Woldai, President of African Association of Remote Sensing of Environment, ITC, Netherlands

Kass Green, Past President of ASPRS acted as facilitator for the strategy meeting held in March 2009.

### Appendix 3 – The implementation of the plan

Note: In order to implement the plan 3 Task Forces (TF) are required: Marketing, Funding and Efficiency and Widening Participation.

Abbreviations: JM\*\*\*\* Joint Meeting of Council and TCPs

CM\*\*\*\* Council Meeting

	Action	Method	Responsibility	Completion
1.	THE SCIENCE			I
1.1	Promote the importance of spatial data	Use international fora and conference addresses to communicate the message.	Council	Ongoing Council activity
1.2	Work with interdisciplinary organisations such as ICSU	Take part in international projects and task groups such as ICSU Regional Offices and GEO.Establish joint working groups with other organisations.Write into Orange Book	Council TCPs	Ongoing Council activity. Revise Orange Book by JM2011
1.3	Establish interdisciplinary working groups	Work through groups such as the Joint Board of Geospatial information Societies (JBGIS), the ICSU Geounions, IEEE and CVPR to identify common activities and set up joint working groups. Write into Orange Book	Council	Ongoing Council activity. Revise Orange Book by JM2011
1.4	Establish working groups to address new topics	TCPs to report to Council on new topics and recommend new WGs.	TCPs ISAC IPAC	JM2011
2.	ADVANCING THE SCIENCE	·	1	1
2.1	Introduce a double-blind review process for Congresses and Symposia	Write into Orange Book	TCPs Congress Director	JM2011
2.2	Publish papers as peer reviewed publications (See action 3.4)	Review current publications and set up new ones.	Council Editor-in-Chief	CM2010

	Action	Method	Responsibility	Completion
2.3	Promote research and development which addresses societal benefit areas	WGs to address science input to societal benefit areas and link to the work of GEO, ISO and OGC, particularly GEO tasks, with active participation. Insert requirements into WG ToRs. TCPs to make contact with GEO contact person.	TCPs	Write into Orange Book JM2011
2.4	Operationalise ISPRS initiatives in disaster and health	Produce publications, capacity building and training materials in collaboration with JBGIS, UN SPIDER and ICSU.	Council	Produce plan by JM2011
2.5	Raise awareness of use of image data for societal benefit	Add case studies to Google, Bing and other similar web services, demonstrating application of image data.	Council TCPs	Each TC to add one case study by JM2011
2.6	Promote use of GI databases and geosensor networks to other scientific communities addressing global climate change	Identify groups working in climate change; collaborate with these groups through joint workshops and joint projects. Make use of data from GeoNetcast. Place review articles in book series. Relevant working groups to prepare information sheets on available datasets and their application.	IPAC	IPAC to set up Task Force to report by April 2012
2.7	Establish student scholarships and exchanges	Explore methods of expanding funding such as The ISPRS Foundation and partnerships with industry.	Council TF Funding and Efficiency	Set up Task Force [TF Funding and Efficiency] to report on funding and efficiency to GA2012
2.8	Develop funding programmes for international collaboration	Compile directory of funding opportunities and register of people interested in collaboration.	TF Funding and Efficiency	April 2012
2.9	Expand training/capacity building in developing countries	Hold workshops, training sessions and tutorials.	TCP VI	Ongoing TCVI activity

	Action	Method	Responsibility	Completion
2.10	Hold conferences in developing countries	Revise guidelines and encourage TCPs to hold WG and Commission symposia in developing countries. Work with other societies, especially through JBGIS.	Council TCPs Reg Reps	First symposia in 2011
2.11	Extend curriculum development activities for developing countries to allow mobility of students and teachers; create new models for new conditions.	First assess needs. Work with UN, CEOS, ITC and others already working in this area. Engage with University of Mississippi curricula, UCGIS GIScience and Technology Book of Knowledge and ITC. Develop low cost methods and resources.	TCP VI	TCVI to report to Congress 2012
2.12	Work with institutions of higher education to promote programmes in spatial science.	Set up a working group within Commission VI to bring together educators to formulate plans to promote spatial science education.	TCP VI	WG to be set up in 2012
2.13	Work with other organisations to develop greater recognition of qualifications in spatial science.	Engage with current activities on curriculum development and accreditation.	Council TCP VI	Report to GA2012
2.14	Develop and improve contacts with scientists, manufacturers and users of the new markets	<ul> <li>Develop sponsorship possibilities and more attractions for Sustaining Members.</li> <li>Optimise exhibitions at inter-Congressional Symposia.</li> <li>Compile an ISPRS list of consultants to help companies enter new geographical markets.</li> <li>Exchange interesting articles with other academic journals.</li> </ul>	TF Funding and Efficiency	Report to GA2012

	Action	Method	Responsibility	Completion
2.15	Identify and reach out to groups to which ISPRS wants to talk, e.g. commercial companies, youth (university and high school students), political level (government decision makers, UN, ADB), other societies (including high-level ones such as GEO, GEOSS, CEOS), space agencies, media, general public	Increase communication with national societies throughout the world. Provide financial support to students to attend meetings. Provide mentorship for students; liaison for students in each region and each country. Provide identified groups with appropriate promotional materials, including educational materials. Make full use of existing networks, e.g. ITC alumni and similar university networks.	Council TF Widening Participation	Form Task Force on Widening Participation [TF Widening Participation] to report to GA2012
2.16	Attract and retain Sustaining Members	Link Sustaining Members to WGs and offer publicity on WG websites and in workshop proceedings. Organise showcase sessions at Congresses. Include links in programmes and Archives to websites. Offer discount on two- or four-year membership. Offer facilities for user group meetings.	Council	To be implemented at 2012 Congress
2.17	Increase involvement of NMAs with ISPRS	Identify areas of interest to NMAs through NMA fora at conferences e.g. updating databases, intelligent services, benchmarking, cyber infrastructure, security. Instruct WGs which cover areas identified to establish contact with NMAs and encourage members from NMAs to join.	Council	Ongoing Council activity
2.18	Provide expert advice to users	Establish list of experts and hold small workshops on selected topics.	Council	Implement in 2011

	Action	Method	Responsibility	Completion
2.19	Establish an easily accessible and well promoted repository of data sets	Collect data from WG projects, especially benchmarking activities and place on server for easy access. Work with organizations, such as EuroSDR, which have projects using useful datasets.	Council TCPs Webmaster	Ongoing activity. Webmaster to report on implementation by CM2011
2.21	Outreach to organisations in new markets	Set up task force to identify new markets and to approach them.	Council TF Marketing	Set up Task Force on marketing [TF Marketing] to report to GA in 2012
3.	COMMUNICATING WITH OTHERS		1	I
3.1	Review membership of international bodies (UN, ICSU, GEO, CEOS etc.)	Promote ISPRS in these bodies, making best use of resources available, such as publicity material, statements to meetings and personal contacts.	Council IPAC ISAC	Ongoing activity
3.2	Increase access to ISPRS meetings	Use 'virtual sessions' and webinars.	Council TCPs	TCPs to report to JM2011
3.3	Improve publication standards to comply with ISI and Scopus or change to abstracts only	Raise awareness of importance of peer review within ISPRS. Introduce two lines for paper submission at every ISPRS event: one with rigorous double-blind review and one with abstract review. Work to include ISPRS book series in ISI and Scopus.	TCPs Congress Director	Ongoing activity
3.4	Consider publishing new open access journals	Review current ISPRS publications and recommend new publications. Consider establishing online journal.	Council Ed-in-C	Action by CM2010

	Action	Method	Responsibility	Completion
3.5	Improve the website	<ul> <li>Use a more dynamic approach to dissemination of information, perhaps phasing up to blog/wiki or other participatory capabilities.</li> <li>Introduce a pressroom and vibrant news section to website.</li> <li>Compile documentation of success stories by members and TC activities and post on the web.</li> <li>Develop digital materials including PowerPoint files and videos which introduce the scientific and technological advantages of ISPRS.</li> </ul>	Webmaster TF Marketing	Ongoing activity. Webmaster to report to Council April 2011
3.6	Increase visibility of ISPRS	Brand ISPRS events and expand advertising to new magazines and newsletters.	TF Marketing	Report to GA2012
3.7	Promote the historical developments of photogrammetry and remote sensing	Publish articles on historical topics of general interest.	Council	Ongoing Council activity
3.8	Issue press releases on a regular basis	Set up a PR office and/or assign PR officer who mainly thinks and works for the promotion of ISPRS.	TF Marketing	Report to GA2012
3.9	Develop a marketing plan	Use the web and perhaps a consultant to provide a strawman, then fill in the blanks.	TF Marketing	Report to GA2012

	Action	Method	Responsibility	Completion
3.10	Stimulation of formation of national and regional societies	List countries which need or want help, contact them and find out their needs; work out and implement a plan to support them.	Council Reg Reps	Prepare plan of action for 2011
		Organise ISPRS tutorials or seminars at the symposia of national and regional societies.		
		Become more involved in regional events and publications, e.g. members' journals.		
		Use conferences to bring together groups from different countries and provide toolkits to show them how to form a society and join ISPRS.		
		Use ITC and other alumni networks; appoint mentors to facilitate this activity.		
3.11	Motivate more women to take part in the Society and encourage Members to present women as candidates for Council and TCPs	Publish articles directed at women: Special issue of <i>IJPRS</i> focused on women authors. <i>Highlights</i> article on women in ISPRS.	Council TF Widening Participation	Report to GA2012
		Collect short articles from international women active in ISPRS activities to demonstrate cultural differences and how women have handled these.		
		Facilitate attendance of women at conferences by providing daycare facilities and scholarships for women.		
		Facilitate networking of women through web-based networks for women.		
		Connect young women scholars with women who have experience of balancing work and family responsibilities.		
		Initiate a mentor program for women students and young professionals.		

	Action	Method	Responsibility	Completion
3.12	Review and increase benefits of membership	Place data and teaching materials on webpage which is only available to members.	Council TF Marketing	Report to GA2012
		Establish an employment and scholarship register.		
		Develop monthly eNews bulletin.		
3.13	Introduce individual membership	Study other individual membership schemes and develop for ISPRS.	Council	Report to GA2012
3.14	Connect national student organisations with ISPRS student consortium	Appoint a liaison officer from ISPRS WG officers for every country, who should bring students into ISPRS activities and student consortium.	TCP VI Pres SC	Immediate action
3.15	Create student presence at conferences.	Include student sessions and involve student consortium.	TCPs	Ongoing activity
			Congress Director	
4.	ORGANISATION AND ADMINISTRATION			
4.1	Increase internal income	Raise subscription fees regularly, perhaps according to some scheme linked to GNP, or some other appropriate rules.	Council TF Funding and Efficiency	Report to GA2012
4.2	Increase income through donations from foundations, Sustaining Members, private	Seek grants for specific purposes, e. g. travel grants for students or project money.	Council TF Funding	Report to GA2012
	companies etc.	Solicit continuing support from Sustaining Members beyond the Congress years.	and Efficiency TIF	
		Establish local endowments.		
		Seek endowed prizes or awards from private companies such as "Company X GIS Award".		
		Provide easily understood guidelines to attract commercial companies as Sustaining Members.		

	Action	Method	Responsibility	Completion
4.3	Increase income by selling something	Sell advertising, in <i>IJPRS</i> , ISPRS proceedings, and online. Organise paid seminars or workshops on ISPRS related state-of-art technologies.	TF Marketing	Report to GA2012
4.4	Increase funds by spending less	Make use of knowledgeable retired people working from home. Conduct meetings by video and teleconferences.	Council TF Funding and Efficiency	Report to GA2012
4.5	Increase income from commercial exhibitions	Introduce the concept of a virtual exhibition, to allow exhibitors to show their posters and materials without travelling to the exhibition site. Work with Sustaining Members to see if they would be willing to sponsor or pay for anything else at Congresses and Symposia.	Congress Director TCPs	Implement for 2012 Congress
4.6	Simplify the rules of the Society, simplify the procedures and cut down on administration	Review current practice and make recommendations for more efficient operation. Consider videoconferencing/e-mailing, permit decisions by responsible individuals and reduce committees.	Council TF Funding and Efficiency	Report to GA2012
4.7	Increase support to carry out strategies for outreach, recruitment, marketing and other activities which need continuity, such as maintaining records, historical documentation, fund raising, book keeping and writing minutes, (releasing SG for more creative activities)	Appoint permanent secretariat. Look at other methods, such as assistant to SG, using retired person. Outsource publications.	Council TF Funding and Efficiency	Report to GA2012

	Action	Method	Responsibility	Completion
4.8	Provide support for organisation of meetings	Look at employing event organiser, or central provision of software to support meetings. Note: ISPRS can take bigger slice of income; TCPs can concentrate on scientific content of conferences/Symposia.	Council TF Funding and Efficiency	Report to GA2012
4.9	Simplify commission and committee structure	Review current structure. Note: There is no clear indication of the need for radical change, but TCs, ISAC and IPAC need to be reviewed, and the need for additional committees should be considered.	Council TF Funding and Efficiency	Report to GA2012
4.10	Rationalise meeting programme and reduce number of meetings	Set up task force to review guidelines and current practice. Note: Structure of four-year Congresses and two-year Symposia works well, but the task force should consider joint symposia and joint bids from two members for one or two Commissions; consider more large, joint workshops and small workshops of experts and consider partnering with other societies.	TF Funding and Efficiency	Report to GA2012