Table of Contents

WG VIII/1: Human Settlements and Impact Analysis

Impact of Corridor Structure on Urban Heat Island in Beijing, China
Mingyi DU, Weixian SUN, Yurong CHEN ................................................................. 1

Historical Aerial Photographs and Digital Photogrammetry for Impact Analyses on Derelict Land Sites in Human Settlement Areas
Andreas P. Redecker ........................................................................................................... 5

Spatial Structure of Land Use Dynamics in Kathmandu Valley
Rajesh Bahadur Thapa, Yuji Murayama ........................................................................ 11

New Airborne Thermal Infrared Photogrammetric Applications and Sensors for Moisture Detection
Rudi Vasel, Gerhard Kemper, Rainer Schuhmann, Franz König ........................................ 17

Object-Oriented Detection of Urban Areas from TerraSAR-X Data
M. Thiel, T. Esch, A. Schenk ............................................................................................... 23

Land Cover Changes in the Region of Rostock - Can Remote Sensing and GIS Help to Verify and Consolidate Official Census Data?
A. Al-Hassideh, R. Bill ......................................................................................................... 27

Satellite Imagery and LIDAR Data for Efficiently Describing Structures and Densities in Residential Urban Land Use Classification
B. I. Alhaddad, J. Roca, M. C. Burns, J. Garcia ................................................................ 35

Model-Based Estimation of Impervious Surface by Application of Support Vector Machines

The Problem of the IHS Method Which Exists in the QUICK-BIRD Image Fusion and the Improvement of It
Zhang Rongqun, Zhai Huiqing, Gao Lingling ................................................................. 45

Spectral Analysis of Building Materials Used in Japan
M. Mori, T. Iwata, Y. Minami, S. Kato, Y. Akamatsu .......................................................... 49

The Application of Remote Sensing and GIS in the Stability Evaluation of Goaves
Wan Yuqing, Kuang Jingshui, Sun Shunxing, Zhou Riping .............................................. 55

Automatic Extraction of Buildings from High Resolution Satellite Images
M. Ettarid, M. Rouchdi, L. Labouab .................................................................................. 61

Identifying the Location and Distribution of the Open-Air Dumps of Solid Wastes Using Remote Sensing Technique
Liu Yalan, Ren Yuhuan, Wang Aihua, Zhou Huizhen ....................................................... 67

Remote Sensing of Impervious Surface Area for Improved Hydrologic Modelling
Y. Zhou, Y.Q. Wang .......................................................................................................... 73

Impervious Surface Change in Beijing from 1984 to 2001
Xueping Liu, Xiaohang Liu ................................................................................................ 79

The Ecological and Economic Methods of Analysis of the Urban Transport System
Baigabulova Zh., Suleimenova K., Bekmagambetova J., Suleimenov I ............................ 83

Sugarcane Expansion Near to Agrarian Reform Settlements: a Case Study of Pontal, Brazil
F. L. M. Freitas, G. Sparovek .......................................................................................... 89

Analysis of Urban Planning in Isa Town Using Geographic Information Systems Techniques
Lamya HAIDER, Mohamed AIT BELAID, Anwar S. Khalil ............................................. 95

Analysis of Vegetation Distribution in Urban Areas: Spatial Analysis Approach on a Regional Scale
Kiichiro Kumagai ............................................................................................................. 101
An Application of Remote Sensing: Object-Oriented Analysis of Satellite Data
V. Barrile, G. Bilotta........................................................................................................107

The Method of Livable Environmental Evaluation Based on Remote Sensing Technology
Luo Lingjun, Hu yan, He Zong..........................................................................................115

Study on Land Use Suitability Assessment of Urban-Rural Planning Based on Remote Sensing—a Case Study of Liangping in Chongqing
Luo Lingjun, He Zong, Hu yan......................................................................................123

Satellite Monitoring of Urban Sprawl and Assessing the Impact of Land Cover Changes in the Greater Toronto Area
D. Furberg, Y. Ban........................................................................................................131

Numerical Analysis of Whiskbroom Type Scanner Images for Assessment of Open Skies Test Flights
Piotr Walczykowski, Wieslaw Debski...........................................................................137

Potosi Mining Development and the Cause of Culture Collapse in Bolivia
Susumu Ogawa, Hiroyuki Kobayashi.............................................................................143

Assessment of Ecosystem Classification Systems at Various Scales on Environmental Parameters Using Remote Sensing Techniques
C. C. Cheng, H. C. Lo, Y. K. Chen, C. D. Wu.................................................................147

WG VIII/2: Hazards, Disasters and Public Health

Modelling Urban Traffic Air Pollution Dispersion
G. Wang, F. H. M. van den Bosch, M. Kuffer................................................................153

Satellite-Based Modelling of Anopheles Mosquito Densities on Heterogeneous Land Cover in Western Thailand
A. Charoenpanyanet, X. Chen........................................................................................159

Application of GIS Modelling for Dengue Fever Prone Area Based on Socio-Cultural and Environmental Factors – a Case Study of Delhi City Zone
Krishna Prasad Bhandari, PLN Raju, B. S. Sokhi............................................................165

Geospatial Informatics Techniques Based Reproductive Health Surveillance System
L.Q. Zhang.....................................................................................................................171

Using Remote Sensing and GIS Techniques in Spatial Information Monitoring of Coal Refuse Disposal Piles
Tang Shilu......................................................................................................................177

Disaster Risk Evaluation and Damage Detection Using Remote Sensing Data for Global Rescue Operations
Masafumi Hosokawa, Byeong-pyo Jeong, Osamu Takizawa, Masashi Matsuoka................183

Application of a Data Mining Model for Landslide Hazard Mapping
Biswajeet Pradhan, Shattri Mansor, Saro Lee, Manfred F. Buchroithner..........................187

Monitoring of Landslide in Kangwondo Area by 2-Pass Differential Interferometry Technique
Jung Jae-Hoon.............................................................................................................197

Infrared Thermography Monitoring and Early Warning of the Spontaneous Combustion of Coal Gangue Pile
Wang Yun-jia, Sheng Yao-bin, Gu Qiang, Sun Yue-yue, Wei Xiu-jun, Zhang Zhi-jie................203

Hierarchical Multi-Sensor Approach for the Assessment of Flood Related Damages
Hong-Gyoo Sohn, Joon Heo, Hwan-Hee Yoo, Seong Sam Kim, Hyoung-Sig Cho...........207

Measuring a Dynamic and Flooding River Surface by Close Range Digital Photogrammetry
J.H. Chandler, R. Wackrow, X. Sun, K. Shiono, P. Rameshwaran..................................211

3D Flood Information from SAR as a Means for Reducing Uncertainties in Flood Inundation Modelling
Renaud Hostache, Guy Schumann, Patrick Matgen, Christian Puech, Lucien Hoffmann, Laurent Pfister........217

Study on Topographic Model Using LIDAR for Tsunami Simulation

Drought Monitoring for ASIA-PACIFIC Area Using the Cloud Parameters Method Based on FY-2 Data
GIS Network Analysis in Rescue of Coal Mine
Kun Fang                                                                                     357

Digital Photogrammetric Products from Aerial Images, Used for Identifying and Delimiting Flood Risk Areas
Ionescu Ion, Badea Dragos, Dogaru Margarita                                                                 361

Monitoring of Hashtgerd Land Subsidence Induced by Overexploitation of Groundwater Using SAR Interferometry
M. Dehghani, M. J. Valadan Zoej, M. J. Bolourchi, A. Shemshaki, S. Saatchi                        365

Detection of Damaged Buildings after an Earthquake Using Artificial Neural Network Algorithm
S. Ahadzadeh, M. Valadanzouj, S. Sadeghian, S. Ahmadi                                             369

UAV Based Monitoring System and Object Detection Technique Development for a Disaster Area
Afzal Ahmed, Masahiko Nagai, Chen Tianen, Ryosuke SHIBASAKI                                      373

A Comparative Study of Three Algorithms for Forest Fire Detection in Iran
S. Movaghati, F. Samadzadegan, A. Azizi                                                   379

Research the Disaster by Remote Sensing and GIS (Case Study Thua Thien - Hue Province, Vietnam)
Truong Thi Hoa Binh, Tran Minh Y                                                               383

Estimating Impervious Surface for the Urban Area Expansion: Examples from Changchun, Northeast China
Dongmei Lu, Kaishan Song, Lihong Zeng, Brian Liu, Shahbaz Khan, Bai Zhang, Zongming Wang, Cui Jin 385

Disaster Information Acquisition System Using Multi-Platform Remote Sensing Technology
Takashi SHIBAYAMA, Takashi NONAKA, Susumu TAKAGISHI, Tadashi SASAGAWA                          393

Radiometric Calibration Methods for Change Detection Analysis of Satellite Data Aimed at Environmental Risk Monitoring
M. Caprioli, B. Figorito, E. Tarantino                                                         397

Drought Monitoring Based on Remotely Sensed Data in the Key Growing Period of Winter Wheat: a Case Study in Hebei Province, China
Guo Hu, Wang Ying, Cui Wei jia                                                                403

Earthquake Destruction Assessment of Urban Roads Network Using Satellite Imagery and Fuzzy Inference Systems
F. Samadzadegan, N. Zarrinpanjeh                                                              409

Automatic Detection and Classification of Damaged Buildings, Using High Resolution Satellite Imagery and Vector Data
F. Samadzadegan, H. Rastiveisi                                                                  415

A Study on the Extraction of Multi-Factor Influencing Floods from RS Image and GIS Data; a Case Study in Nackdong Basin, S.Korea
Youngjoo KWAK, Akihiko KONDOH                                                                    421

A Comparison between Methods – a Specialized Operator, Object Oriented and Pixel-Oriented Image Analysis – to Detect Asbestos Coverages in Building Roofs Using Remotely Sensed Data
V. Barrile, G. Bilotta, F. Pannuti                                                                427

Functioning of Fire and Flood Space Monitoring System in Kazakhstan
O.P. Arkhipkin, G.N. Sagattinova                                                                435

Relations between Disaster Management, Urban Planning and NSDI
F. Batuk, B. Şengezer, O. Eremem                                                                    441

Design and Implementation of Mobile Spatial Information System for Public Health Emergency
Weixing Wang, Jianhua Gong, Weijun Yang, Dan Feng, Jinjin Zhang, Wuchun Cao                         445

A SDSS-Based Earthquake Damage Assessment for Emergency Response: Case Study in Bam

Symbology in the Forest Fire Emergency Map
An Zhang, Qingwen Q                                                                               457

Advanced Real-time Disaster Information Mapping Technique by Integrating UBGI (Ubiquitous Geographic
WG VIII/3: Atmospheric, Climate and Weather Research

Atmospheric Smog Modelling, Using EOS Satellite ASTER Image Sensor, with Feature Extraction for Pattern Recognition Techniques and its Analysis of Variance with In-Situ Ground Sensor Data
Parthasarathi Roy, Paul Beaty, J. O. Brumfield, Ralph Oberly, Anita Walz, John Pollard, Jeff Dooley, Paul Kennedy, Jeff Dooley

Studies on Emissions from Forest Fires Using Multi-Satellite Datasets over North East Region of India
Shailesh Kumar Kharol, K.V.S. Badarinath, P.S. Roy

Operational Aerosol Optical Mapping from Remotely-sensed Data over Land Surface in China
Yong Xue, Xiaoye Zhang, Wei Wan

Multi-Spatial Scale Aerosol Optical Thickness Mapping for Beijing Using Remote Sensing Technique
Jie Guang, Yong Xue, Xiaowen Li, Linyan Bai, Ying Wang, Yingjie Li, Wei Wan, Jianping Guo

GIS-Based Multi-Agent Traffic Micro Simulation for Modelling the Local Air Pollution
M. Khalesian, P. Pahlavani, M. R. Delavar

Corrections for Atmospheric and Adjacency Effects on High Resolution Sensor Data – a Case Study Using IRS-P6 LISS-IV Data
Anu Rani Sharma, K.V.S. Badarinath, P.S. Roy

Atmosphere's Optical Micro Parameters Influence upon Polar-Phase Curves of Scattered Radiation
S.V. Korkin

The Research on Application of FY-2C Data in Drought Monitoring
YU Fan, LIU Liang-ming, WEN Xiong-fei

The Design and Application of Network of Ground-Based GPS Water Vapor Monitoring Stations to Improve Precipitation Prediction in the Greater Beijing Metropolitan Area
Chao-Lin Zhang, Ying-Hwa Kuo, Lian-Jun Dai, Yan-Li Chu, John Braun, Jing-jiang Zhang, Qing-Chun Li, Min Chen

Estimation of Atmospheric Column and Near Surface Water Vapor Content Using the Radiance Values of MODIS
M. Moradizadeh, M. Momeni, M.R. Saradjian

Monitoring Evapotranspiration for Terrestrial Groundwater Dependant Ecosystems Using Satellite-Based Energy Balance Model
X. Yang, P. Smith, T. Yu, H. Gao, D. Tien

The Identification and Analysis of Human Causation in Atrocious and Abnormal Natural Disasters by the Method of Satellite Remote Sensing
Na Yang, Liangming Liu

The Simulation Study on Land Surface Energy Budget over China Area Based on LIS-Noah Land Surface Model
CHEN Yingying, SHI Jiancheng, QI Yuanyuan, JIANG Lingmei

I. A. Winnicki, K. Kroszczynski, J. M. Jasinski, S. Pietrek

Modified Triangle Method to Estimate Soil Moisture Status with Moderate Resolution Imaging Spectroradiometer (MODIS) Products
X. Yang, J. J. Wu, P. J. Shi, F. Yan

The Unified Role of GPS, Photogrammetry, GIS and Land Policy in Securing Land Tenure in Developing Countries
J. Urban-Karr, J. McKenna

Application of Non-Hydrostatic Numerical Models Data and Meteorological Satellites Images to Investigation of Aircraft Flight Conditions within Clouds Systems
I. Winnicki, J. Jasinski, K. Kroszczynski, S. Pietrek

Hazardous Meteorological Phenomena Forecasting Using Remote Sensing Data and Products of Numerical Weather
Prediction Models
I. Winnicki, J. Jasinski, K. Kroszczynski, S. Pietrek.................................................................571

Calculation and Discussion on Correcting Model of the Potential Temperature above Complex Terrain Based on NOAA/AVHRR and DEM
DAN Shang-ming, DAN Bo, XU Hui-xi, CHEN Gang-yi, AN Hai-feng........................................577

Validation of Atmospheric Heat Budget Parameters in the Western Indian Sector of the Southern Ocean
Alvarinho J. Luis, M. Sudhakar, R. Ravindra.................................................................583

Investigation of Impact of Solar-Terrestrial Connections on Cloudiness in Northern Asia on Remote Sensing Data
V. S. Solovyev.................................................................587

The RS Images Restoration of CBERS-2 Based on Atmospheric MTF Evaluation Using Meteorological Data
Zhenguo WANG, Zexun GENG.................................................................591

A New Method to Estimate the Visible Reflectance from Short Wave Infrared Wavelength
JI Dabin, SUN Lin, JIANG Tao, DI Mei.................................................................597

Surface Urban Heat Island in Shanghai, China: Examining the Relationship between Land Surface Temperature and Impervious Surface Fractions Derived from Landsat ETM+ Imagery
Z. Zhang, M. Ji, J. Shu, Z. Deng, Y. Wu.................................................................601

The Efficacy of Semi-Automatic Classification Result by Using Different Cloud Detection and Diminution Method

Visualization of NASA A-Train Vertical Data on Google Earth™
A. Chen, G. Leptoukh, S. Kempler, C. Lynnes, L. Di.................................................................613

Land Cover Transformation Feature Understanding by MODIS and Response to Climate in Upper Stream of Yellow River
Wei Ouyang, Andrew Skidmore, Fanghua Hao, Chen Zhao, Huaping Yao, Xuan Zhang.................................619

WG VIII/4: Management of Tropical Environments Research

Remote Sensing and Coastal Ecosystem Monitoring in French Guiana: Research and Achievements over a Decade
Laurent Polidori.................................................................627

Seasonal Changes of Forest Environments in the Mekong River Basin
H. Sawada, Y. Sawada, A. Shimizu, M. Araki, S. Chann.................................................................633

Habitat Monitoring for Ecosystem in Iriomote Island with Satellite Data
Hiroyuki KOBAYASHI, Susumu OGAWA.................................................................637

WG VIII/5: Policies, Treaties and Data Access

Earth Observation from Space for the Protection of Unesco World Heritage Sites: Dlr Assisting Unesco
Mario Hernandez, Ulrich Huth, Gunter Schreier.................................................................643

WG VIII/6: Coastal Management Ocean Colour and Ocean State Forecasting:

Morphologic Change Detection in the Wadden Sea from LIDAR Data
Alexander Brzank, Christian Heipke, Jens Goepfert.................................................................647

Coastal Wind Analysis Based on Active Radar in Qingdao for Olympic Sailing Event
Xiaoming LI.................................................................653

Remote Sensing of Sea Surface Features: Implications of Fisheries in North Pacific Ocean
WANG Wen-yu, SHAO Quan-qin.................................................................659

GIS Based Sectoral Conflict Analysis in a Coastal District of Turkey
Aysegul Tank, Dursun Zafer Seker, Izzet Ozturk, Cigdem Tavsan.................................................................665

Contribution of the Yangtze River to Ecosystem of the East China Sea
Ichio Asanuma, Jinshan Zhu, Chaofang Zhao, Bangqin Huang, Quan-xi Xu.................................................................669
Ocean Color Products Retrieval and Validation around China Coast with MODIS  
L. Sun, M. Guo, X. Wang ................................................................. 673

Modeling Water Quality Using TERRA/MODIS 500m Satellite Images  
M. S. Wong, J. E. Nicho, K. H. Lee, N. Emerson ........................................... 679

Determination of Ocean Datum Using GPS Buoy Observation Data  
Jungsoo Hong, Kisuk Back, Unyong Park, Dongrak Lee, Sungyoul Cha ......................... 685

Coastline Change Analysis Using RTK-GPS and Aerial Photo  
Kim Yong Suk, Lee Dong Min, Hong Soon Heon, Chung Chang Sik, Lee Kang Won .................. 689

MODIS Data Processing for Coastal and Marine Environment Monitoring: a Study on Anomaly Detection and Evolution in Gulf of Cagliari (Sardinia-Italy)  
F. Dessi, M. T. Melis, L. Naitza, A. Marini ...................................................... 695

Application and Analyses of Airborne LIDAR Technology in Topographic Survey of Tidal Flat and Coastal Zone  

Assessment of Soil Erosion Risk in Northern Thailand  
LV Tingting, SUN Xiaoyu, ZHANG Dandan, XUE Zhenshan, GONG Jianming ......................... 703

Using Multi-Temporal Remote Sensing Data to Manage the Mangrove for Coastal Environmental Protection  
Truong Thi Hoa Binh, Pham Viet Hoa, Le Kim Thoa, Nguyen Viet Luong ................................ 709

Evaluation of Biological Films to Sea Surface Roughness Observed by SAR  
D. Hasegawa, I. Asanuma, Y. Arvelyna .............................................................. 713

Negative Contribution of Groundwater Input from Subsurface Spring to Coral Reef Bleaching  
Hironori Yamaguchi, Ichio Asanuma, Hideki Shimamura ............................................. 719

Assessment of the Sensors MODIS/TERRA and WFI/CBERS-2 for the Amazon River Suspended Sediment Monitoring  
G. S. F. Molleri, E. M. L. M. Novo, M. Kamps, L. M. G. Fonseca ....................................... 725

WG VIII/7 Water Resources Security and Management

Praveen Raj Saxena, N.S.R.Prasad ........................................................................ 729

Improvement of Rainfall-Runoff Models Using Optical and Radar Remote Sensing Data  
L. Halounová, M. Švec, J. Horák, J. Unucka, M. Hanzlová, L. Juříkovská ....................................... 733

A Study on Surface Water Resources in Chaobaihe Basin of Beijing Based on BEIJING-1 Microsatellite Data  
H. Z. Zhou, Y. B. Chi, Z. Y. Wang, Q. Wu, Q. Ran, C. J. Wei ........................................ 739

Groundwater Level Monitoring Model Using Multi-Temporal Images in Arid Region of Northwest China  
S.B. Pan, Z.J. Wang, Q. X. Su, T. Sun, Y. Zhang .................................................... 745

Haijing Wang, Lesego Kgotshang, Wolfgang Kinzelbach .................................................. 751

Monitoring Diurnal Underwater Temperature Using FY-2C in Poyang Lake Nature Reserve, China  
Xiao Zhou, Valentijn Venus, Zhang Haitao ........................................................................ 757

Imagery Information on Drainage Features  
M. Lazaridou, E. Patmios ......................................................................................... 763

Estimation of Daily Transpiration by Three-Temperatures Model at Large Catchment Scale  

Simulation of Flooding Inundation of Guiyang City Using Remote Sensing, GIS and Hydrologic Model  
X. Wang, X. Gu, Z. Wu, C. Wang .............................................................................. 775

Monitoring of Suspended Substance Concentration in Three Gorges Dam Based on the Semi-Analytical Model  
GAI Li-Ya, LIU Zheng-Jun, ZHANG Ji-Xian, SUN Yin-Hang ........................................ 779
Simulation of Water Soil Erosion Effects on Sediment Delivery to Dobczyce Reservoir
W. Drzewiecki, S. Mularz

Using TM Image to Estimate the Quantity of Sand Sediment in Poyang Lake: a Case in Nanji Xiang Vilage
Xinghua Le, Zhewen Fan, Yu Fang, Yun Zhang

Snow Mapping of Alamchal Glacier Using Remote Sensing Data
N. Roshani, M. J. Valadan Zouj, Y. Rezaei, M. Nikfar

WG VIII/8: Polar and Alpine Research

A Global Snowmelt Product Using Visible, Passive Microwave and Scatterometer Satellite Data
James Foster, Son Nghiem, Marco Tedesco, George Riggs, Dorothy Hall, John Eylander

Application of Terrestrial Photogrammetry for Glacier Monitoring in Alpine Environments
V. Kaufmann, R. Ladstädter

Remote Sensing Application in Antarctic Inland Areas
Zhou Chunxia, E Dongchen, Wang Zemin, Sun Jiabing

Interoperable Antsdi -the Geospatial Information Gateway to Antarctica: Architecture and Application
Nengcheng Chen, Zeqiang Chen, Jie He

DEM Creation of a Snow Covered Surface Using Digital Aerial Photography
C. Y. Lee, S. D. Jones, C. J. Bellman, L. Buxton

Crevasse Detection in Alpine Areas Using Ground Penetrating Radar as a Component for a Mountain Guide System
K. Eder, C. Reidler, C. Mayer, M. Leopold

Construction of Geographic Informatics on King Sejong Station in Antarctica Using Lightweight Aerial Photogrammetry System
YunBu Yeol, Lee Jae One, Son Howoong, Lee Young Hee

WG VIII/9: Arid Lands, Land Degradation and Desertification

Land Degradation Monitoring in the West Muus, China
W. Wu, E. De Pauw, C. Zucca

GIS-Based Approach for Change and Prediction of Soil Erosion
Zheng Qingfeng, Yuan Lifeng, Andreas Martha


Comparison of Land Surface Temperature Mapping Using MODIS and ASTER Images in Semi-Arid Area
M. Akhoondzadeh, M. R. Saradjian

Environmental Monitoring in Mongolia Supported with MODIS and FY-2C Satellite Data
M. Erdenetuya

Cartographic Monitoring of a Soil Erosion of the Mountain Territory of Tajikistan
H. M. Akhmadov

Desertification and Sustainable Agricultural Development of Tajikistan
G. Nekushoeva, H. M. Akhmadov

Research on Factors Analysis Model of Dualistic Soil Salinization Sensitivity in Typical Northwestern Arid Area
Tao Sun, Hailing Deng, Shibing Pan, Shifeng Huang

Estimation of Grassland Degradation Based on Historical Maximum Growth Model Using with Remote Sensing Data
Gu Zhihui, Shi Peijun, Chen Jin

Quantitative Mapping of Soil Organic Material Using Field Spectrometer and Hyperspectral Remote Sensing
Zhuo Luo, Liu Yaolin, Wu Jian, Wang Jing
Desert Vegetation during Droughts: Response and Sensitivity
C. Bhuiyan.................................................................907

The Research on Desertification Land Extraction Based on Object-Oriented Method
L. Li, A. H. Wang, Y. B. Chi, Z. Y. Wang.................................................................913

Study on Dynamic Changes of Desertification in the Farming-Pastoral Zone of the Northern Shaanxi Province
Q. Chang, W. Tao.................................................................919

Landslide Occurring Probability Decision Based on Remote Sensing and Quantification Theory II
Zhang Wenjun, Wang Weihong.................................................................925

WG VIII/10: Precision Farming and Sustainable Food Production

Consistency Analysis on Paddy Rice Area Survey with Spot and Tm Images under the Total Restraint Quantity
Li Le, Li Chao, Zhu Xiufang, Pan Yaozhong.................................................................929

The Use of Remote Sensing within the Mars Crop Yield Monitoring System of the European Commission
B. Baruth, A. Royer, A. Klisch, I.G. Genovese.................................................................935

Using Remote Sensing to Support Different Approaches to Identify Agave (Agave Tequilana Weber) Crops
J. G. Flores Garnica, R. Reich, E. Talavera Zuñiga, C. Aguirre Bravo.................................................................941

Study on the Crop Condition Monitoring Methods with Remote Sensing
Meng Ji-hua, Wu Bing-fang.................................................................945

Study on Envisat ASAR Data Assimilation in Rice Growth Model for Yield Estimation
S. H. Shen, S. B. Yang, B. B. Li, X. Y. Zhao, B. X. Tan, Z. Y. Li, T. Le Toan.................................................................951

Crop Area Assessment Using Remote Sensing on the North China Plain
Dong Qinghan, Eerens Herman, Chen Zhongxin.................................................................957

Variability of NDVI Agricultural Used Areas
V. Zdímal, J. Pospíšil, V. Šafář.................................................................963

Corn 3D Reconstruction with Photogrammetry
W. Zhang, H. Wang, G. Zhou, G. Yan.................................................................967

Sugarcane Phenological Date Estimation Using Broad-Band Digital Cameras
M. R. Mobasheri, M. Chahardoli, J. Jokar, M. Farajzadeh.................................................................971

Optimized Designs of Frameworks and Elements in Spatial Sampling for Crop Area Estimation
Wang Di, Zhou Qingbo, Liu Jia.................................................................979

A Study on Fast Estimation of Vegetation Fraction in Three Gorges Emigration Area by Using SPOT5 Imagery
Zhu Liang, WU Bing-fang, Zhou Yue-min, Meng Ji-hua, Zhang Ning.................................................................987

Land-Use Analysis Performance in Precision Agriculture: Evolution Algorithm of Data Mining
Deng Yuejin, Cai Jingjing, Yan Shijiang.................................................................993

Evaluation of the Usefulness of Texture Measures for Crop Type Classification by Hyperion Data
H. Ashoori, H. Fahimnejad, A. Alimohammadi, S. R. Soofbaf.................................................................999

WG VIII/11: Sustainable Forest and Landscape Management

Satellite Data Time Series for Forecasting, Habitat Modelling and Visualisation of the Managed Boreal Forest Landscape
H. Olsson, O. Sallnäs, M. Nilsson, M. Egberth, P. Sandström, J. Bohlin.................................................................1007

A Fully Automated Procedure for Delineation and Classification of Forest and Non-Forest Vegetation Based on Full Waveform Laser Scanner Data
C. Straub, H. Weinacker, B. Koch.................................................................1013

An Accuracy Assessment of DSMS and Orthoimages Derived from ALOS/Prism and Their Availability in Forestry
Y. Imai, Y. Akamatsu, M. Mori, N. Shirai, M. Maruya, H. Ohyama.................................................................1021

Change Detection in the Mixed Ombrophilous Forest Using Multispectral Radiometric Rotation Approach
Airborne Remote Sensing for River Environmental Assessment
Y.Hirose, Y.Imai

Analysis of Middle Pulse Data by LIDAR in the Forest
Katsutoshi. OKAZAKI, Noritsuna. FUJII

Siose, a Successful Test Bench towards Harmonization and Integration of Land Cover /Use Information as Environmental Reference Data

Detection of Landcover Changes with Rapid Urbanization Using Remotely Sensed Data in and around Chongqing, China
Y. Zhao, M. Tomita, K. Hara, M. Fujihara, Y. Yang, L. Da

Combined Supervised Classification Methods in Remote Sensing for the Evaluation of Forest Dynamics along the Slopes of Mount Cameroon
Kah Elvis F., M. Tchindjang, TONYE E., TALLA T. N

WG VIII/12: Geological Mapping, Geomorphology and Geomorphometry

Stream Processes and Dynamics in the Morphology of the Densu River Channel in Ghana
J.M. Kusimi

Qin Qiming, Li Baishou, Li Peijun, Zhang Zexun, Ye Xia, Cui Rongbo

Targeting Limestone and Bauxite Deposits in Southern India by Spectral Unmixing of Hyperspectral Image Data
S. Sanjeevi

Characterization of Hydrocarbon Microseepages in the Tucano Basin, (Brazil) through Hyperspectral Classification and Neural Network Analysis of Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) Data
T. Lammoglia, C. R. Souza Filho, R. A. Filho

Spectral Analysis of Aster, Hyperion, and Quickbird Data for Geomorphological and Geological Research in Egypt (Dakhla Oasis, Western Desert)
G. Waldhoff, O. Bubenzer, A. Bolten, W. Koppe, G. Bareth

Detection and Interpretation of Geological Linear Features on the Satellite Images by Using Gradient Filtering and Principal Component Analysis
C. Ayday, E. Gümüşlüoğlu

The Key Roles of Remote Sensing Techniques for Evaluating Environmental Issues Posed by Mining: a Case Study
Yanhua Liu, Jinde Zhang

Study and Determination of Morphological Changes of Dough River in North of Iran Using GIS
A.Mohammadi, S. Alaghmand, A. Mosaedi

Remote Sensing Application in Higher Permeability Area Prediction of Coal Bed Methane
Mao Yaobao, Feng Fucheng, Xie Zhiqing, Bao Guibao

Digital Terrain Analysis Using Airborne Laser Scanner (LIDAR) Data for Natural Hazard Assessment
H. Sasaki, S. Mukoyama, N. Nagata, K. Namikawa

Geological Outcrop Modelling and Interpretation Using Ground Based Hyperspectral and Laser Scanning Data Fusion
T. H. Kurz, S. J. Buckley, J. A. Howell, D. Schneider

Multi-Temporal DEM Matching Method without Control Points in Debris-Flow Area*
Qin Jun, Hu Cheng, Zhang Tonggang, Cen minyi

Seismogis: a Tool for the Visualization of Earthquake Data
C. Willmes, J. Weskamm, U. Baaser, K.-G. Hinzen, G. Bareth

Geological and Structural Setting of Wadi Hodein Area Southeast Egypt with Remote Sensing Applications
M.F.Sadek

Research on the Information Extraction of Periglacial Geomorphology in Qinghai-Tibet Plateau
Theme Session: ThS 19 - Integrated Coastal Zone management

Integration of Bathymetric and Topographic LIDAR: a Preliminary Investigation.
N. D. Quadros, P.A. Collier, C.S. Fraser.................................................................1299

Costline Extraction in VHR Imagery Using Mathematical Morphology with Spatial and Spectral Knowledge
Puissant, S. LetEvré, J. Weber..................................................................................1305

Multi-Dimensional Geospatial Data Integration for Coastal Change Analysis
R. Li, S. Deshpande, X. Niu, I-C. Lee, B. Wu..........................................................1311

Extracting Tidal Stream Networks from High-Resolution Remote Sensor Imagery: a Preliminary Study
X. Yang, J. Morris..............................................................................................1317

Mapping Bathymetry from Multi-Source Remote Sensing Images: a Case Study in the Beilun Estuary, Guangxi, China
Zhongwei Deng, Minhe Ji, Zhihua Zhang..............................................................1321

Algorithm for Deriving Sea Surface Current in the South China Sea
Nurul Hazrina Idris, Mohd Ibrahim Seeni Mohd.....................................................1327

Design and Implementation of a Coastal Web Atlas (CWA) for the Integrated Coastal Zone Management of Jiangsu, China
J. YAO, X. Zhang, F. Zheng, C. Zhu, Y. Li, X. Ding................................................1333

Monitoring Dynamics of Grassland Vegetation in Poyang Lake National Nature Reserve, Using MODIS Imagery
Guan Yan, Lin Wenjing, Zhou Feilong, Zeng Nanjing.........................................1337

An Novel Theory to Segment Iso-Surface in Marine GIS 3D Data
Qiu Zhen Ge, Xin Xian Hui, Li. Qiong, Zhang Chun Ling, Guo Zhang.....................1343

Protected Coastal Area (PCA): Why? How?

Theme Session: ThS 20 - Public health

Verification and Validation of Desert Dust Forecasts and Their Impact on Respiratory Health Applications in the Southwestern United States
S.A. Morain, A.M. Budge.....................................................................................1355

Geospatial Services for Decision Support on Public Health
S. Gao, D. Mioc, X. Yi, F. Anton, E. Oldfield .................................................................1361

Spatial Analysis of the Distribution of Typhoid Fever in Turkey
D. Toprak, S. Erdoğan .................................................................1367

Low Cost UAV for Post-Disaster Assessment
H. Bendea, P. Boccardo, S. Dequal, F. Giulio Tonolo, D. Marenchino, M. Piras ........................................... 1373

Nuclear Waste Related Satellite Mapping in Northwest Russia
O. B.Dick, O. Reistad, S. Hustveit, G. Grepstad, Frits Steenhuisen .........................................................1381

Theme Session: ThS 21 - 3D modelling in forestry applications

Application and Precision Analysis of Tree Height Measurement with LIDAR
Hejun Li, BoGang Yang, Xiaokun Zhu .................................................................1387

The Utility of LIDAR for Recovering Ecological Variables
N. Miura, S. D. Jones .................................................................1393

Towards 3D Mapping of Forests: a Comparative Study with First/Last Pulse and Full Waveform LIDAR Data
J. Reitberger, Cl. Schnörr, M. Heurich, P. Krzystek, U. Stilla .................................................................1397

Potential and Limits of Airborne Remote Sensing Data for Extraction of Fractional Canopy Cover and Forest Stands
and Detection of Tree Species
L. T. Waser, H. Eisenbeiss, M. Kuechler, E. Baltsavias .................................................................1405

Radar and LIDAR Synergy Studies by Model Simulation
Guoqing Sun, Z. Guo, W. Ni, K. Jon Ranson, D. Kimes .................................................................1413

Special Session: SS 12 - Observation and monitoring of Polar regions

Determination of Spatio-Temporal Velocity Fields on Glaciers in West-Greenland by Terrestrial Image Sequence
Analysis
Hans-Gerd Maas, Ellen Schwalbe, Reinhard Dietrich, Michael Bässler, Heiko Ewert, .............................................1419

Topography of Glaciers and Ice Caps with SPOT 5 HRS
Jérôme Korona, Etienne Berthier, Marc Bernard, Frédérique Rémy, Eric Thouvenot, .............................................1425