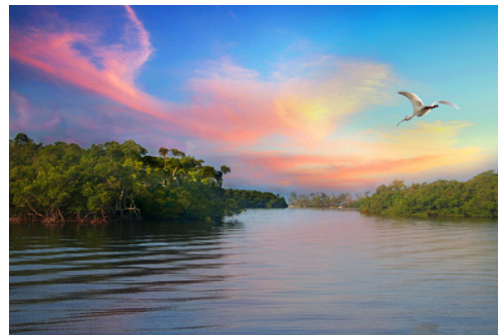
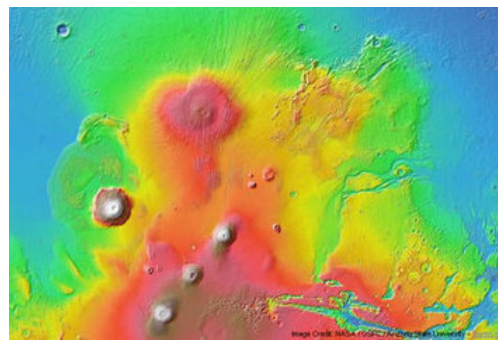


GREENFIELD consulting & development

Guide your decision with comprehensive background research



Greenfield Consulting Ltd.

Capability statement 2008

2 Co Tan

Hoan Kiem, Hanoi

Tel: +84-4-9367001

Email: info@gfd.com.vn

<http://gfd.com.vn>

About	<p>GreenField is a research-based company providing consulting services in rural development, energy sector, and water resources in Vietnam and South-East Asia.</p> <p>With the strong academic background of a research team, we specializes in offering solutions for development project that are scientific-based, data driven and problem oriented.</p> <p>In addition, GreenField extensive experience in local knowledge, culture and business system allow us to craft practical and realistic solution that ensure the successful in project implementation of our clients.</p> <p>One of GreenField's outstanding strengths is our ability to bring together the right size team, with the right combination of skills, and in the right location, at the right time. We have an extensive network of multi-discipline experts and are very comfortable working in virtual team environments, with teams of employees and contractors, local and international crossing geographical boundary.</p>
Service	<p>GFD services are focused on 4 business areas:</p> <ul style="list-style-type: none">• Agriculture and Rural Development• Natural Resources Management• GIS and Remote sensing• Clean Environment• Water Resources Management• Clean and Renewable Energy• Social research and Base line study <p>These areas reflect major trends in Vietnam’s Agriculture and Rural Development: i) The critical need of improving productivity, diversification and competitiveness in agriculture sector; ii) The high demand on quality forest plantation product and natural forest protection; iii) The changing in climate phenomenon regarding forest ecosystem, and clean development mechanism; and iv) The demand from development agencies for quality base-line study that is essential for forecasting and simulation study.</p> <p><i>Agriculture and rural development</i></p> <p>Land-use-based livelihood development</p> <p>Land-use-based livelihood is a term referring to group of people, whose income is mainly from cultivation, livestock and forest product exploitation. In the up lands over 90% income of farmers are generated from land-use activities. An efficient land-use-based livelihood framework is the key for sustainable rural development programs, ensure food securities, and poverty reduction. In the last 10 years, the land per capital is decreased significantly because of population pressure. Farmers need help to change their land use method, to be equipped with</p>

new technology in order to boost productivity and diversify their product. GFD's approach in land-use-based livelihood development is based on three principles: participatory; use of indigenous knowledge and technical one in harmonious. In particular, priorities are given for following activities :

- Sustainable agriculture in the sloping lands;
- Developing suitable cash crops and market information;
- Community-based forest management.

Land use planning

Land use rights represent the single most important asset for the world's rural poor. GFD's practice focuses on the legal, policy, institutional, and educational issues of rural land reform; setting up a reliable land administration and introducing cadastre systems; GIS-based land use planning; and farm reorganization. We provide services for:

- Land allocation and post land allocation preparation
- Land use planning
- Land information system
- Improvement of water and irrigation system

Natural resources management

In developing countries, increasing population and growing welfare place pressure on the natural environment and result in problems such as deforestation, overgrazing, and the contamination of land and water resources. In turn, the depletion of natural resources frequently leads to land scarcity and to widespread changes in land use. Increasingly, also, we are aware that environmental issues may transcend national boundaries.

As evidenced by various international agendas and agreements, natural resources management concerns us all. To address these problems and to understand the complexity of factors involved, resource managers must collect and interpret relevant data and work together with professionals from a wide range of disciplines.

At GFD, we employ modern tool in geosciences, modelling and quantitative assessment to assist our client addressing this challenging and important work. GFD expertise on NRM include:

- Forest resources management
- GIS and Remote sensing
- Biodiversity assessment

GIS & Remote sensing

Geosciences is always a core discipline at GreenField. As an interdisciplinary consulting company, we firmly believe that spatial data can help us to unlock the interrelationship between environment process and the social process. Our approach toward GIS and Remote sensing is aiming at the understanding and quantification of geo-process through advance data acquisition, analysis and

modeling.

We offer our clients with a complete GIS and mapping circle: field survey, data analysis, Geodatabase development, design and production of quality cartographic map.

We support most of current GIS technology

- MapInfo and MapExtrme
- ArcGIS and ArcEngine
- Open source GIS

Our GIS mapping service includes

- Field survey for soil mapping, forest mapping and land use mapping
- Development of map database and software
- Land evaluation and site matching
- Land use planning map
- Production of paper map, and map book
- Map catalog on CD
- Web-based map solution

Remote sensing services

- Arial photo interpretation
- Remote sensing image classification
- Hyperspectral images for nutrition modeling
- SAR and radar images for flood mapping and forest volume estimation
- Lidar processing

Satellite Images and Aerial photograph

GreenField provide a wide range of satellite imagery in various format, resolution, and processing level. With our large image archive covering most past of Vietnam, and close partnership with data provider, we are able to offer satellite images and aerial photograph with a very competitive price and customized imagery product. Contact us to discuss image acquisition option and pricing.

- Aerial photo: old archive covering all Vietnam
- Very high resolution: QuickBird, Ikonos
- Medium resolution optical imagery: Landsat ETM+, ASTER, SPOT, IRS (India), ALOS (Japan)
- Low resolution optical: MODIS, MERIS
- SAR: ENVISAT ASAR, RADARSAT
- IRS (India)

Clean Development & Assessment

Environment assessment, and Clean Development Mechanism (CDM) is the new paradigm ship in global development program. The Clean Development Mechanism (CDM) offers important opportunities for sustainable development in Vietnam.

The agriculture & forestry sector, in particular, could benefit through new approaches in bio-fuel energies and carbon trading and emission reduction. It is necessary to evaluate different aspect of the agriculture / forest ecosystem, continues monitoring its interaction with surrounding environment and predicts future trend through modeling tool. GFD research interest in this sector are:

- Vulnerable ecological system
- Forest economical valuation
- Carbon budget and base line study
- Clean Development Mechanism (CDM)
- Environment Impact Assessment (EIA)
- Monitoring and Evaluation

Water resources management

In Vietnam the future growth in the rural sector is expected to come from further crop diversification and increases in productivity, making the quality of irrigation services of central importance.

At the same time, industrial and urban growth are straining available water resources and the need to manage water among competing users within river basins is increasing.

GFD consulting in cooperation with specialized water engineering company, provide arrange of services in water resources management include:

- Feasibility study and planning for urban water supply and sanitation project
- Integrated irrigation management system
- Water distribution management system (WDMS)
- Institutional, policy review and analysis

Clean and renewable energy

GreenField specializes in developing solutions for rapid deployment of cost-effective, reliable, and environment-friendly energy systems. GreenField's expertise in energy includes:

- Energy efficiency & demand reduction
- Energy network planning
- Clean energy solutions
- Technology & market assessments
- Energy project monitoring and evaluation

GreenField has lead and participated in the feasibility, master planning of hydropower station, energy network as well as project in energy regulation. We are the long-term partner of IPA energy, one of the leading specialised energy practices in Europe

Project development and base-line study

Project formulation and feasibility study

- Project identification and formulation
- Feasibility studies: Technical, financial and market survey
- Project appraisals and evaluation
- Technical assistance and advisory services for project implementation

Base line surveying: market study, rural social economic surveying

Most of GFD market studies involve an element of quantitative market size and structure analysis as well as short and long-term forecasting. GFD experts specialize in sample design, deploying tradition surveying campaign or online questionnaire, and delivering quality statistical analysis.

All data result can be delivered in formats that are suitable for direct import into client's information databases or can be hosted on GFD's server as an online application. We work in close collaboration with a number of partners in IT industry to develop intelligent solution for data presentation and visualization in form of map, chart and interactive report.

**GFD
Team**

GreenField is led by Prof. Dr. Hoang Xuan Ty. Ty is a leading scientist in forest ecology and environment. His long-term study in soil under plantation forest have significantly contributed to the understanding of nutrient cycling in forest ecosystem. As a scientist Dr.Ty has led many research programs in forest soil, ecology and environment with funding from both government of Vietnam and international sponsors such as CIFOR, IIED, FAO, ESCAP, IDRC. As a consultant Dr. Ty has completed many assignments for the Worldbank, UNDP, ADB, FAO, IUCN, GTZ.

Other core member of GreenField are:

Mai Van Trinh, Ph.D. Soil Science and Agronomy

Ngo The An, Ph.D. Agronomics

Hoang Viet Anh, Ph.D. GIS & Remote Sensing

Nguyen Thi Thuc Anh, MSc. Photogram try and Geodesy

Dao Viet Dung, MSc. Water resources and Energy

Bui Thanh Trung, Msc. Energy

Do Hong Anh. MA. Social science

Vo Nguyen Khanh Nha. M.A. Economics

GreenField also have a network of more than 100 research associate in a wide range of disciplines on which we regularly draw to provide technical assistance to our projects. They are leading expert working for university and research institutes with expertise in water resources, agriculture, energy and power, civil engineering, institutional development, infrastructure and urban planning.

Projects

Year	Project	Client	Person months	Type of work
2008	Evaluation of the European Commission's Co-operation with Vietnam. EVA 2007/geo-non-ACP	EU/ PARTICIP GmbH	4	<p>The evaluation of the Commission's co-operation with Vietnam is part of the 2008 evaluation programme as approved by EU and aiming at ensuring accountability for the management of the allocated funds as well as promoting a lesson-learning culture throughout the organization.</p> <p>The main objectives of the evaluation are: i) to provide the relevant external co-operation services of the EC and the wider public with an overall independent assessment of the Commission's past and current cooperation relations with Vietnam; ii) to identify key lessons in order to improve the current and future strategies and programmers of the Commission.</p> <p>In this project, GreenField in partner with PARICIP provide the consulting services in rural development and forestry related project review and evaluation.</p>
2008	Sustainable Public Procurement in Vietnam	IISD	6	<p>This project funded by International Institute of Sustainable Development (IISD) is aiming at: i) Explore the feasibility to introduce SPP pilot projects in Vietnam, ii) Build consensus and obtain buy in from key government authorities to provide leadership for SPP and iii) Build consensus across key stakeholder groups on the SPP business case. In this project GreenField conducted an in-depth literature review of law and regulation framework related to SPP and working with selected government agencies such as MARD, MoF, MOIT, MoIT to propose options on the design of pilot SPP programmers in the</p>

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				forestry sector in Vietnam
2008	Training course for new technology in forest surveying and mapping	VIDAGIS	5	Provide training course for new technology in surveying and mapping: VN2000 projection system; use of GPS in modern survey; mobile mapping in real time environment; geo-statistic; opportunity and challenges for GIS application in Rural Development sector.
2008	Water resources valuation for Dong Nai 2 Hydropower Station project (80 MW)	Trung Nam Group	8	Provide consulting service for hydrology system analysis, water resource valuation, and estimation of sediment deposition.
2008	Location-based Intelligent system	PhucSinh Ltd.	6	Phuc Sinh is a leading agricultural product trading company, that have an extensive network of brokers in Vietnam and shipping their product worldwide. In this project GreenField developed a system that allows tracking information of dealers, brokers, warehouse and shipping based on their location. The system was built on ArcSDE, ArcGIS server technology.
2007	GIS system for Dong Nai 2 Hydropower station project (80 MW)	Trung Nam group	8	Provide based map and GIS system for operational design and planning: topographic map 1:2000, road network, site 3D model, integrated CAD system.
2007	Development of GIS-based Rural Water Management System	VIDAGIS	10	Provide review and outline of integrated rural water management system. Design conceptual frame work for GIS-based water management system. Simulation of water supply / demand in different scenario of hydrology, land use system.
2007	Biodiversity assessment and database development for Huong Son conservation forest	Ha Tay province, DARD	6	The Service include: i) Biodiversity surveying and forest mapping; ii) Biodiversity assessment using quantitative method; iii) Develop integrated Geo-database for storage and management of surveying data, monitoring plot, and biodiversity profile

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2007	Assessment of bamboo resources in Vietnam using remote sensing data	OXFAM	4	Service include: i) satellite image data acquisition and pre-processing; ii) development of data processing and classification method; iii) estimation of bamboo species, area, and stock
2007	Namla hydropower plant (27MW) in Sonla province	Nam La PMU	5	Provide consulting service for PUM to calculate and design to connect to National system
2007	Country Program Partnership for Sustainable forest land management, Vietnam.	UNCCD	9	The service provided include: i) Land management and land degradation profiles; ii) Institutional assessment of capabilities for sustainable land management; iii) Produce guidelines for best practice in forest land allocation and land use planning; iv) Produce guidelines/resource kit for the full range of possible v) field level sustainable land management interventions
2006	Solar energy for remote areas in Quang Binh province	Quang Binh PPC	8	Provide training and supervise for the installation of electricity panels system at 66 villages in 10 communes of Quang Binh province (20kW)
2006	Strengthening Institutional Capacity of Local Stakeholders for Implementation of Son La Livelihood and Resettlement Plan. TA-4690 (VIE)	ADB	10	The service include (i) assessing the master plan of resettlement sites in Son La, Lai Chau and Dien Bien /focus to Land use plan at resettlement sites (i) assessing training needs of stakeholders on Land use plan issue (iii) Preparing training modules on Micro-land use at household level and implementing TOT training of this topic for agriculture extension staffs in 3 provinces of project areas
2006	Vietnam Finland forestry co-operation Project in Bac Kan Province.	Viettan consulting Ltd.	10	Provide service on: survey of natural forest management system, critical review of legal and institutional framework.
2006	The Rural infrastructure Development & Living standard improvement project III - Afforestation	JBIC	12	Provide institutional & environment consulting services: (i) project management and monitoring the progress (ii) develop a

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	Sector at Quang Nam, Quang Ngai, Phu Yen, TT Hue and Quang Tri provinces			Benefit sharing regulation for forest plantations that established by JBIC funding in 5 provinces, Central Vietnam
2005	Assessment of wood resources in Bac Kan Province	Viettan Ltd - Indufor Engineering	6	Provide analysed information on the potential for appropriate small to medium scale mechanical forest industry development in the Province based on the available raw material.
2005	Khe Soong Hydro-power Plant at Quang Ninh province	Khe Soong Hydro-power Plant	7	The service include: building GPS network for monitoring the deformation of the dam; surveying and making topographical maps of reservoir bed and power plant
2005	Binh bridge Project, Hai Phong city	Binh bridge PMU	6	Service provided: consultant service for positioning bridge's abutments and piles; leveling
2005	Integrated Rural Development in Northern Uplands Provinces, Vietnam.	Viettan Ltd.	10	Provide institutional and social research, include: i) poverty reduction, targeting especially the poorest people including those from the ethnic minority groups in the most remote areas taking fully into account the possible higher costs involved and related benefits; ii) targeting financially viable and environmentally sustainable activities for community development; iii) training and capacity building requirements in order to empower local institutions and rural people through a participatory approach
2005	Integrated Water management of pumped irrigation system in the Red River Delta of Vietnam	ACIAR, Australia	10	Project preparation, data collection and processing for computer-based management software development (Irrigation Main System Operation Program – IMSOP model) applied to La Khe Irrigation system in Ha Tay province. Monitoring system installation and monitoring data collection, training for software application to irrigation company staff. Model operation trials with different system operation scenarios. Took part in writing project annual report and project workshops' organisation.

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				Development of GIS database for the project management. Irrigation system asset evaluation and monitoring.
2005	Ngoi Duong small hydro-power plant in Lao Cai city - Feasibility study stage	Lao Cai Mineral company (LAMICO)	12	Provide consulting service for project feasibility study. Arrangement for field survey and data collection for setting up the project feasibility study. Responsible for general project report writing. Feasibility study was completed and had been approved by local Authority and EVN.
2005	Construction of Ngoi Duong small hydro-power plant in Lao Cai city (technical and construction design stage)	Ngoi Duong small hydro-power plant in Lao Cai city	20	Provide consulting service for project technical and construction design. Site visits, design of project layout, headwork and pressure tank. Making arrangement for design staff to complete the project document.
2004	Strengthening the management capacity and raising awareness for biodiversity conservation at Dakrong Nature Reserve, Quang Tri province	SNV		i) Providing consultant in Land Use Planning -LUP and Forest Land Allocation -FLA activities at the 41 communes in the buffer zones of Cat Tien National Park and Chu Mom Ray Natural Reserve/ Central High Land. (ii) Analyzing and assessing the commune action plans in the project areas/ focus on new sustainable farming systems and agriculture/ forestry extension activities
2004	Forest Protection and Rural Development Project (FPRDP).	WB	20	The service include: (i) Providing consultant in Land Use Planning & Forest Land Allocation activities at the 41 communes in the buffer zones of Cat Tien National Park and Chu Mom Ray Natural Reserve/ Central High Land. (ii) Analyzing and assessing the commune action plans in the project areas/ focus on new sustainable farming systems and agriculture/ forestry extension activities
2004	Land capability mapping for World Bank afforestation project at 5 provinces in the middle	World Bank	4	The service provided include: i) establish GIS database for all provinces including soil map, slope, land cover, social-

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	area of Vietnam			economic factors; ii) land capability mapping for 5 provinces using land evaluation and multi-criteria analysis method; iii) produce 200 maps for all project areas including: provincial land use planning map and data, district maps of land capability and tree-site matching, and detail implementation maps for every communes i the project areas.
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