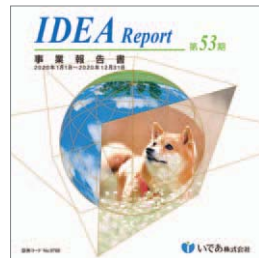


Brochure of Institute of Environmental Ecology



Technology publication: i-NET



Business Report

Introductory content to understand IDEA



**IDEA Website**

For more details of IDEA's services, technologies and corporate information, please go to: <https://ideacon.jp/en/>



**Official YouTube channel**

IDEA's corporate profile video with a showcase of its technologies

**I D E A**  
CONSULTANTS, INC.  
CORPORATE PROFILE





## Message from the board

IDEA Consultants, Inc. had its origins in Japan's first private sector weather forecasting company in 1953.

With the prominence of pollution issues associated with the high rate of economic growth, the company, as a pioneer in environmental consultancy in Japan, began its engagement with the environmental sector by developing methods and approaches for surveys and analyses of the atmosphere, the hydrosphere and terrestrial systems.

We have since grown to be a leading integrated consultancy for environmental science by expanding our businesses into environmental assessment, nature restoration, organic trace chemicals analysis and life science while addressing ever changing environmental issues over time.

Since the merger in 2006 with NIKKEN Consultants, Inc. a pioneering construction consultant, we have established as our mission "to contribute to the society through sustainable development of a safe, secure and

sound society and supporting conservation and inheritance of a healthy and productive environment" as we expand our businesses.

In recent years, as we face wide-ranging social challenges from the environment to the economy to the community that are complex and interrelated, we believe that the solutions through our work based on our philosophy since inception of "making the effort to look one step ahead with a frontier spirit", will eventually lead us to the development of a sustainable society.

IDEA, as an integrated consultancy for social infrastructure development and environmental conservation, resolves to contribute to society through ceaseless efforts on creating technologies and academic research with the spirit of fairness and independence, thereby continuing to create new values as a company.

IDEA will greatly appreciate your continued support and encouragement.

## Corporate motto

To contribute to the society through ceaseless efforts to create technologies and academic research as well as growing the company's business and improving the well-being of our employees, in the spirit of fairness and independence, as an integrated consultancy for social infrastructure development and environmental conservation.

## Corporate slogan

"For the future of the people and the Earth"  
For Our Bright Future

## Management vision

To contribute to society through sustainable development of a safe, secure and sound society and supporting conservation and inheritance of a healthy and productive environment.

Chairman

Hideo TABATA



President

Akihisa TABATA



### The origin of the company name

"I-D-E-A" is an acronym for "Infrastructure", "Disaster", "Environment" and "Amenity" which encompasses the types of services we provide. In addition, "IDEA" as the central concept of Platonism suggests "eternal, unchangeable concepts" and incorporates our commitment to approaching the essence of important issues as consultants and our endeavour to always pursue the truth.

### Meaning of the logo



"i" at the centre represents "I(i)" of "IDEA" and "a person", the blue area represents "the Earth", the curve represents "a wave" and the green circle represents "plants" and "a face". Looking at the logo as whole, it also looks like a person with a raised hand, implying that it is a company with people at the centre. The corporate colour of blue symbolizes "the earth where society and nature exist in harmony."

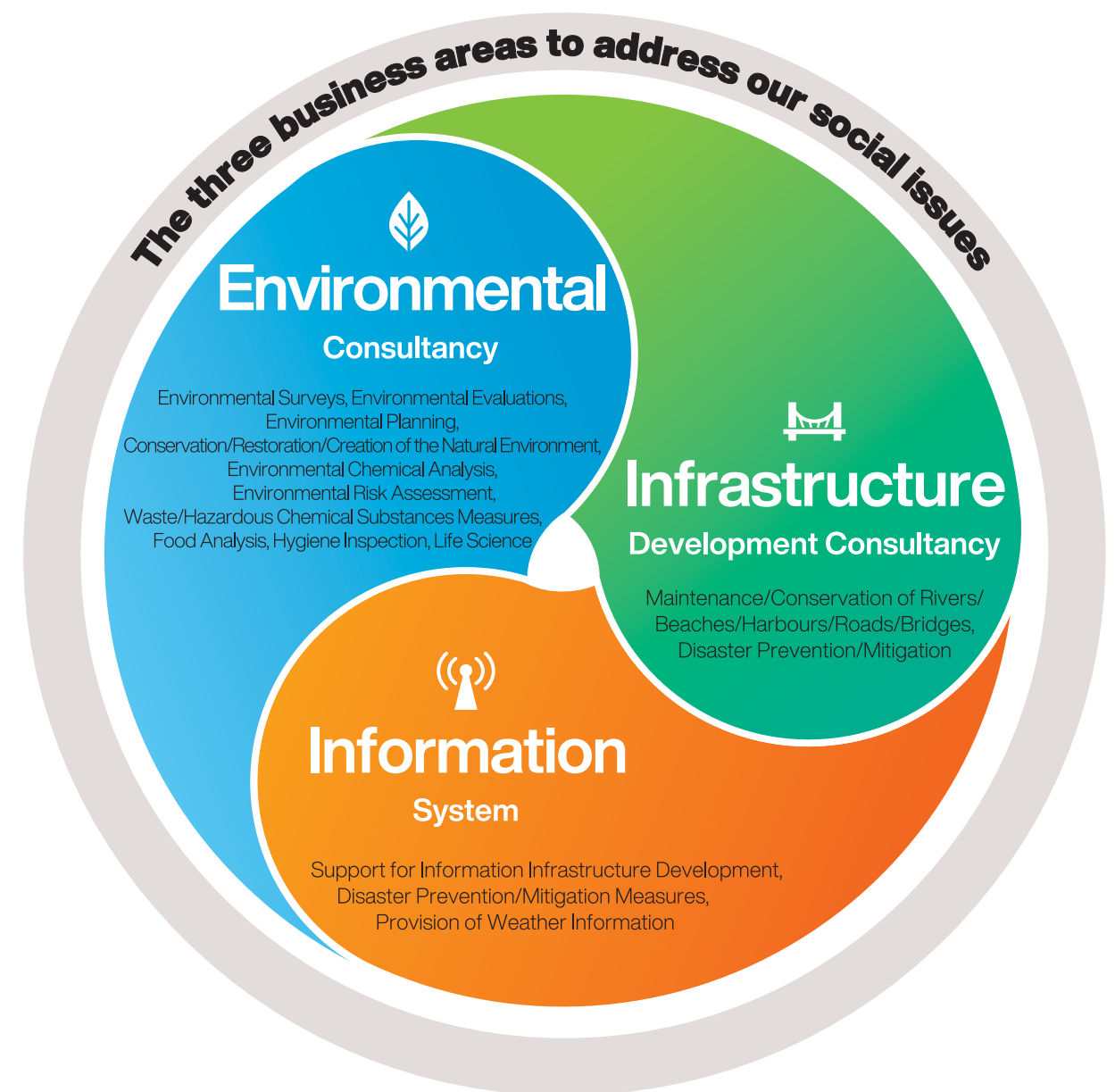
# Integrated Consultancy on Social Infrastructure Development and Environmental Conservation

We provide services of high value to meet clients' requirements in every phase of social infrastructure development and environmental conservation projects, from the project planning, survey, analyses and assessment phases to the design, measures and maintenance phases.

Extending these services to countries outside Japan, we are engaging in various types of consulting largely involving international cooperation and partnership projects.

We are also making positive efforts to the development of new technologies and human resources, to enhance our credibility and add value.

We support “sustainable development of a safe, secure and sound society” and “conservation and inheritance of a healthy and productive environment.”



## IDEA's one-stop service





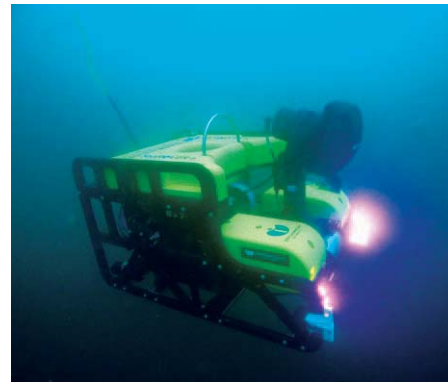
# Environmental Consultancy



## Environmental Surveys

### Surveys on the Aquatic Environment

We conduct comprehensive surveys for aquatic environment covering inland water area to sea area, covering chemical, physical and biological aspects, mainly for environmental assessment, monitoring as well as conservation using our best-in-industry technical capabilities.



Equipped with underwater 3D scanner ROV

## Visualising environment through advanced technology

### Surveys on Terrestrial Environment

We conduct surveys on various environmental factors in the physical and chemical environments in the terrestrial areas: measurement and evaluation of the air quality/noise/vibration, surveys and consulting on soil contamination and waste, and weather observation for wind-power generation, etc.



Wind condition observation tower

### Aerial Surveys

Aircraft and/or drones are used where outdoor observation is difficult: vegetation surveys and animal behaviour tracking, laser surveys, surveys on water temperature / chlorophyll by multispectral scanners, emergency surveys in times of disaster, etc.



Environmental surveys using proprietary helicopter



UAV helicopter

Hovering type AUV, developed in-house: YOUZAN

## Environmental Chemical Analysis

### Chemical Analysis/Experiments

Analysis of various chemical substances using the most advanced equipment, which focuses on the understanding of the state of the chemical substances in our immediate living environment and environmental monitoring, in order to secure the safety of people's lives.



Pre-treatment robots for PCB analysis

## Fast and accurate measurement and confirmation of a wide variety of chemical substances

### Analysis/Evaluation of Environmental Risks

Provision of integrated consultancy with an aim to mitigate and manage environmental risks through surveys/analyses/evaluations of the environmental risks from hazardous chemical substances (impact on the ecosystem and human health) by ecological effect tests and ecotoxicological tests.



Exposure test for Japanese medaka using flow-through water device

### Food Analysis/Hygiene Inspection

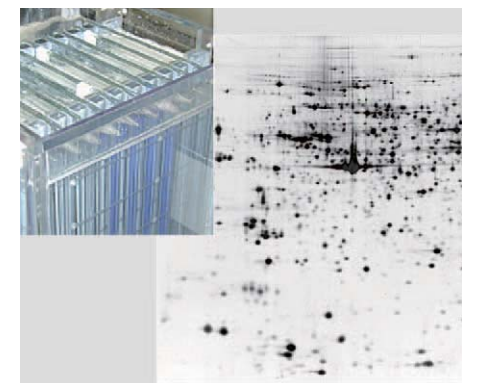
Evaluation of food safety and functionality through analyses and inspections for various substances (agricultural chemicals, additives, heavy metals, etc.) and pathogens included in food (e.g. nutrients analysis and food fraud inspection). A variety of inspections for imported/exported food are also undertaken.



Food analysis and inspection

### R&D Support for Life Science

R&D support for the diagnosis/analysis of refractory diseases such as cancer, analysis of master cells and pharmaceuticals using technologies that enable accurate analyses of biological protein, genes (DNA/RNA) and physiologically active substances.



Two-dimensional electrophoretic protein image



Environmental Evaluation  
/Planning

Support the realisation of positive cycle between the environment, the economy and society based on cutting-edge scientific knowledge and the wealth of proven track record

**Environmental Assessment**

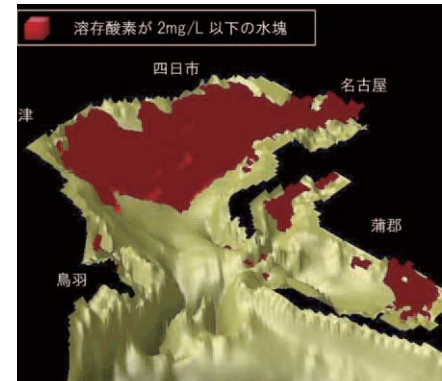
Environmental impact assessment encompassing environmental considerations at the planning phase, preparation of survey plans, field surveys, impact assessments and mitigation plans and post-project surveys, as well as implementation of public consultations and various conferences based on our extensive experience.



Environmental assessment (Naha Airport)

**Forecasting/Evaluation by numerical analysis**

Environmental variation forecasting by numerical simulation of the air/aquatic environment and biology. In the area of aquatic environment, we provide high precision evaluations such as considerations into the effect of conservation measures by making full use of our own models for eutrophication models of ecosystems.



Prediction of DO (dissolved oxygen) in Ise Bay

**Management of the Natural Environment**

Through evaluation of the natural environment in rivers / lakes, tidal flats/marshes and by estimating the appropriate habitats for the growth of animals and plants, we provide nature restoration planning and support its implementation and project evaluation for the sustainable management of the natural environment.



Economic value evaluation of the ecosystem services (Lake Kasumigaura)

**Regional Environment Management Planning**

In aim to achieving a sustainable society, we provide environmental management planning and a variety of other planning concerning regional and basin environmental management such as the establishment of regional circular and ecological sphere as well as the formulation of measures, project evaluation and dissemination of environmental policies.



Conservation, Restoration and  
Creation of the Natural Environment

Comprehensive surveys/analyses and conservation/restoration of the organisms and their surrounding environment

**Biological Surveys**

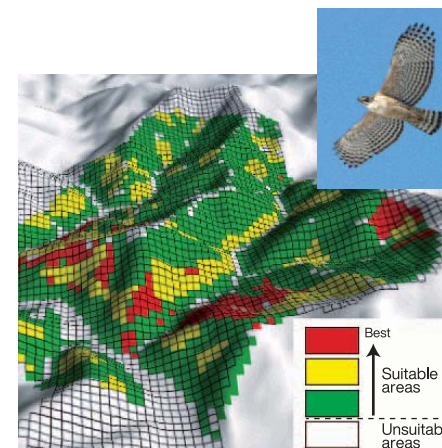
Surveys on the inhabitation and habitat for all types of organisms including mammals, birds, reptiles, amphibians, fishes, insects, plants and planktons from sea areas to alpine regions throughout the country using the latest equipment and technology.



Fish surveys (cast net)

**Ecological analysis of rare species**

Quantitative analysis and evaluation of the ecosystem including the breeding status, feeding ground / habitat and food chain by using data obtained from analyses of rare species and alien species using AI-powered image analysis technology.



Analysis of suitable nesting site for mountain hawk-eagle

**Impact Prediction on the Ecosystem and Conservation Measures**

In the environmental assessment concerning various development projects such as wind power generation facilities, we provide impact prediction/assessment on the biological/ecological systems and conservation measures for rare species. We also investigate the impact on ecosystems from microplastics and radioactive materials.



Transplanting rare plants

**Conservation of Biodiversity**

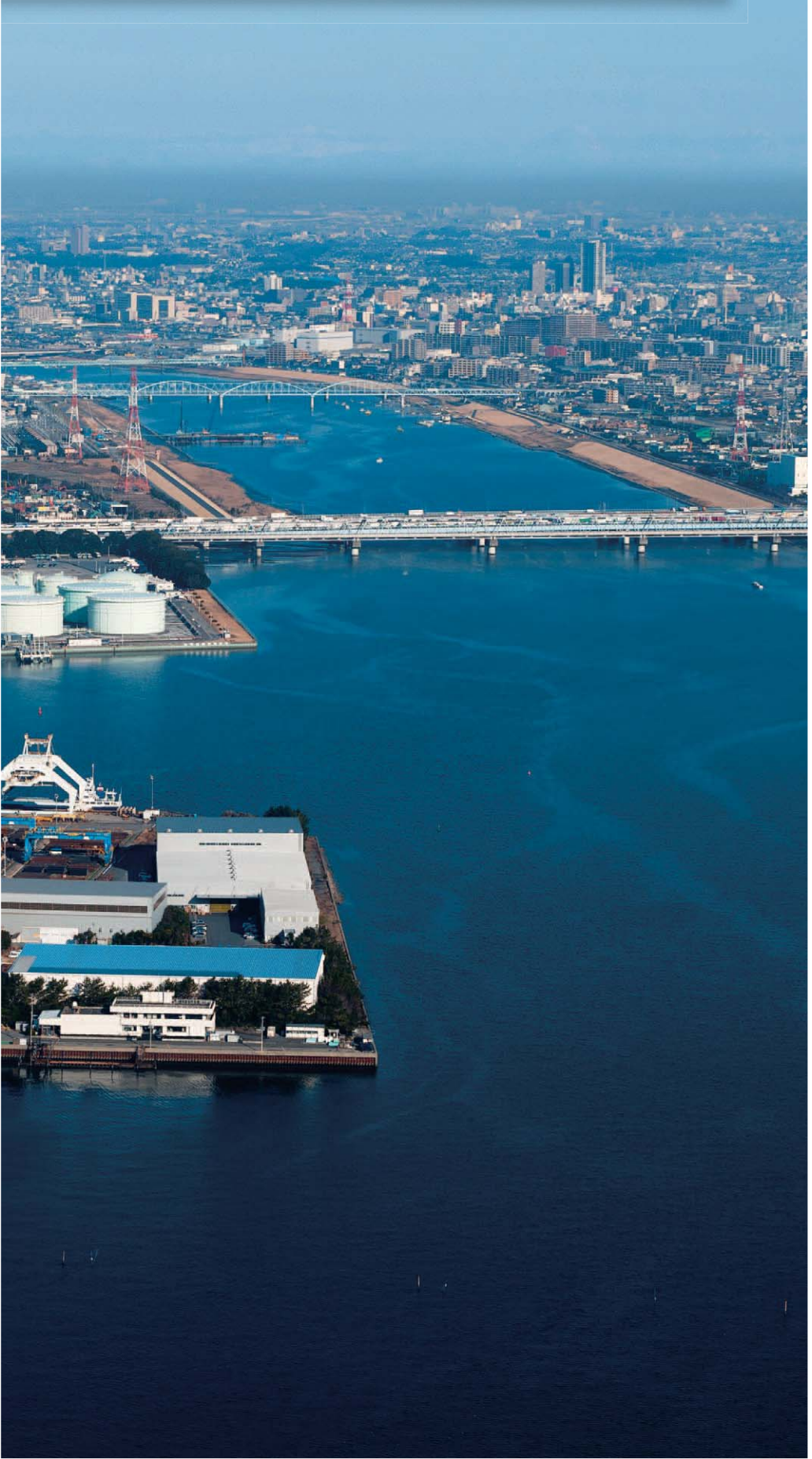
Conservation of biodiversity through nature restoration initiatives such as conservation planning for rare species in wildlife sanctuaries, restoration of habitat environment by creating multiple nature type waterfronts, propagation of rare species and extermination of alien species.



Transplanted coral assemblages



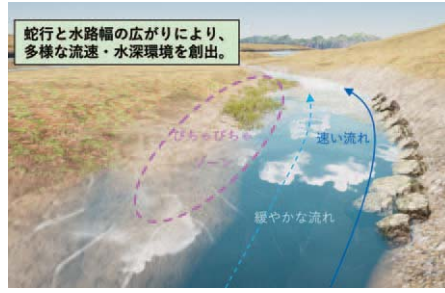
# Infrastructure Development Consultancy



## River Basin Development/ Management

### Development of rivers and channels management

Surveys, analyses and planning to formulate policies and plans for developing river-related infrastructure. River management planning designed for disaster control and conservation/creation of sound river environments is also implemented.



River channel drilling with consideration for the river environment (3D imagery)

### Prevention of Sediment Disaster by Soil Erosion Control

Surveys, analyses, facility design and maintenance / management planning related to measures for sediment disasters caused by debris flows and landslides using the latest analysis technology such as three-dimensional flow analysis and 3D data (BIM/CIM).

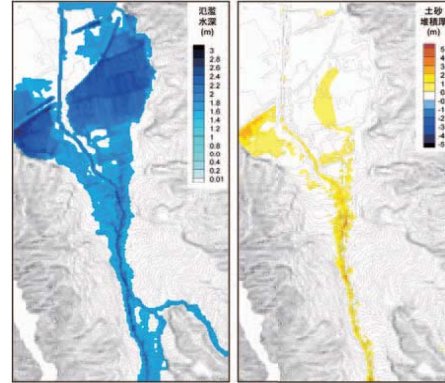


Detailed design for erosion control facilities (Yamaguchi prefecture)

## Development of river basins for safe, secure and sound life in harmony with nature

### Development of Disaster-resistant Country

Disaster prevention/mitigation planning through river basin management and analysis of sediment and flood damages and development of flood forecasting and warning systems incorporating analysis models, forecasting systems and AI technologies, to secure the safety of the nation from natural disasters that have been occurring with increasing frequency and intensity in recent years.

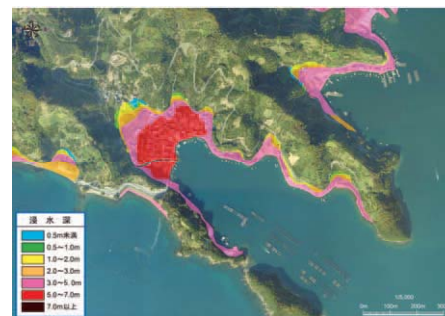


Case examples of analysis results using a sediment flood inundation model

## Coastal Management/ Maintenance

### Creation of Safe and Sound Coastal Areas

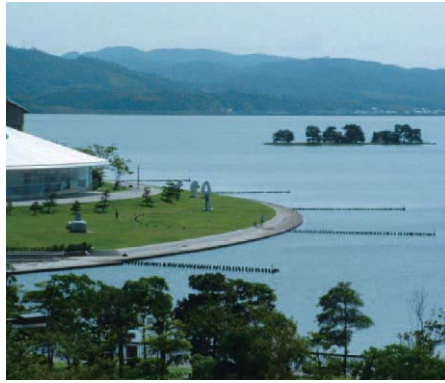
Conduct surveys, analyses and planning for coastal maintenance. Draft plans for coastal maintenance and estuary management using various analytical models for coastal protection, conservation and management of the coastal environment and proper use of coastal areas.



Tsunami hazard map

### Creation of Comfortable Waterfront Areas

Together with the environmental consultancy projects, we provide riverside planning which gives a sense of peace and comfort through environmentally sound water cycle, create a rich riverside environment for fauna and flora and plan a riverside where people can enjoy their interactions with nature.



Designing of a lakeside park around Lake Shinji

### Planning and Designing of River Construction

Surveys, planning, designing and maintenance of various structures for river water use/management as well as implementation of river management projects while paying attention to safety, landscape and the environment.



Designing of the floodgate (Kitakami River)

## Creation of coastal areas with an optimum balance between protection, the environment and utilization

### Coastal Erosion Measures

In response to coastal erosions that occur due to various factors, we provide countermeasure plans through identification of the causes of these erosions and estimation of topographic changes using analysis models for wave deformation and topographical change.



Hydraulic model experiment to confirm the effectiveness of artificial reef scouring measures

### Surveys, Planning and Designing of Coastal Facilities

Surveys, planning, designing and maintenance/management of coastal facilities which protect human lives and assets from high tides/tsunami (high tides/tsunami banks, tide gates, guide walls, detached breakwaters, breakwaters, jetties, artificial reefs, anti-overtopping wave structures, etc.).



The Headland Plan in the Chigasaki area of Shonan beach (Kanagawa prefecture)



Planning/Design/Maintenance of Roads and Bridges

**From Road Planning to Management**

To create a safe and comfortable road space, we provide comprehensive support services for the planning/designing to construction/maintenance management of road facilities. We contribute to road development that is essential for social infrastructure development through road disaster prevention measures such as slope disaster prevention.



Installation of bicycle lanes in front of stations

Transportation Planning, Urban /Regional Planning

**Planning for smooth road traffic**

Surveys / analyses concerning road maintenance (new construction/improvement) including road network development using future traffic estimation and big data, to achieve smooth interregional exchange and lively urban development.



Evaluation of road safety using Driving Simulators

Improvement road signs using MMS

Creation/Support/Protection with the Latest Technology

**Planning and Design for Road Structures and Bridges**

Planning and design for road structures and bridges incorporating the latest technology to meet various needs such as cost reduction, environmentally harmonious structures, high aseismic capacity, landscape-conscious design and easy maintenance.



Junction Bridges



Active use of BIM/CIM

Road and Urban Planning for the Future

**Environmentally Friendly Road/Urban Spaces**

Planning and design for road development in order to create affluent and pleasant communities where one can benefit from with security, backed by swift evacuation/rescue operation in the event of a disaster and effective use of regional resources.



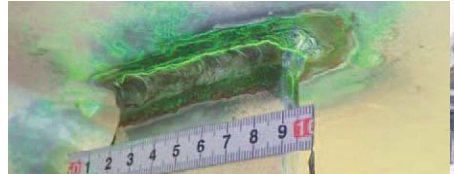
Maintenance of primary local roads (removal of utility poles, promote barrier-free)

**Efficient Surveys, Maintenance Planning**

Draft plans for maintenance and monitoring based on asset management, to provide longevity/anti-aging measures through inspection/diagnosis/evaluation of existing road structures and bridges.



Inspection/diagnosis by bridge inspection vehicles



Detailed surveys of steel girder crack damage

Development/Maintenance of Harbours/Fishing Ports

**Surveys/Planning for Port Facilities**

Draft plans for the development/improvement of harbours and fishing ports in view of coastal protection/use /environment and economic viability by using the latest numerical analysis technology concerning waves and tsunami/ high tides, as well as meteorological / nautical surveys for coastal facilities.

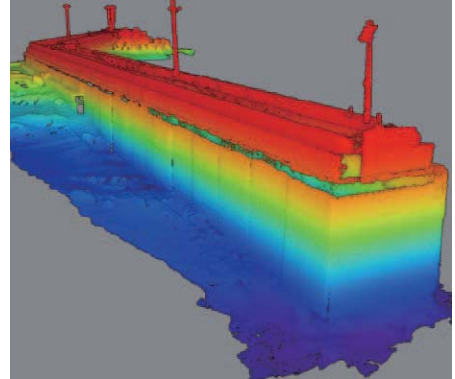


Examples of harbour shapes based on the analysis and estimation of topographic changes

“Port development” as a basis for supporting lives of the nation

**Design and Maintenance of Harbour Facilities**

Planning and designing for high quality facilities with due consideration to biological habitat creation and water amenities, while securing wave resistance and aseismic capacity for harbour facility maintenance. Appropriate maintenance and management of existing facilities are conducted through inspection/diagnosis/repair/reinforcement.



3D point cloud data for port facilities maintenance (breakwaters)



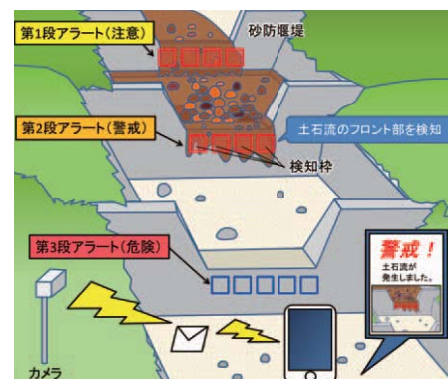


# Information Systems

## Disaster Prevention/ Mitigation System Development

### Protecting Our Livelihood by Image Analysis

Design and development of various information systems for prevention/mitigation of water disasters by using image analyses taken from CCTV cameras / IoT cameras as well as robot cameras with AI. Development of image analysis-based systems which require fewer people with more automation.

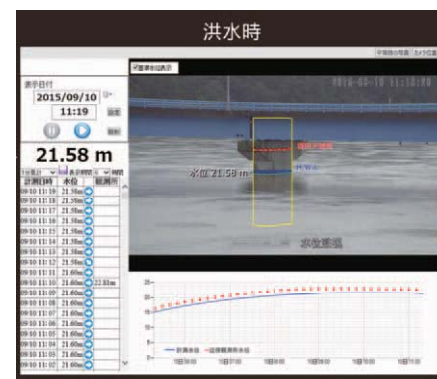


Debris flow alert system

## Creation of safe and sound societies that are protected from intensifying natural disasters by use of information and communication technologies (ICT)

### Information Sharing through Visualisation

Development of 3D models and monitoring systems for rivers, sand embankments and roads by use of still and moving images taken by drones (UAV: unmanned aerial vehicles). Development of systems for easy visualization of various simulation results.



River water level measurement system using CCTV

### Disaster Awareness through Virtualisation

Creation of educational applications and materials for disaster prevention to help improve disaster prevention awareness of local communities using VR (Virtual Reality) and AR (Augmented Reality) technologies. Creation of CGs and moving images using game engines and web applications.



Observation of flood event using virtual reality (VR)



A screenshot example of a submerged city using augmented reality (AR)

### Disaster Readiness through Training

Planning / operation / evaluation of role-playing training and workshops for improved awareness for disaster prevention as well as supporting disaster prevention plan revision and drafting Business Continuity Plans (BCP). Support various disaster control efforts through SNS and other systems with mapping capabilities.



Disaster countermeasure workshop

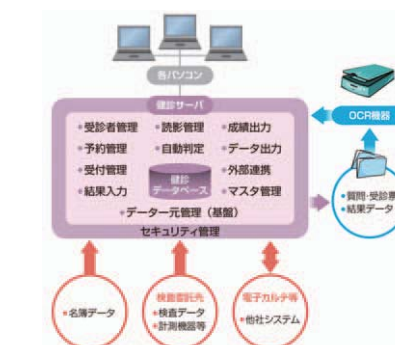
## System Development and Operational Support

### System Planning, Design and Development

Development of enterprise systems in private companies and government offices as well as applications using smart devices. Also provide support for improved operational efficiency after the systems go live.

## Consulting, design, development and operational support for various systems

- Design/development/maintenance of medical check-up management system
- Development of business operational support applications for smart devices
- Development of programmes to analyse flight trajectory of birds
- Analysis of images from earth observation satellites and operation support



Overview of health diagnosis support system



Proprietary tablet devices for field surveys

## Distribution of Weather/ Health/Living information

### Bio-weather Service

Provision of weather forecasts that are useful for health management for private companies and general users focusing on the connection between weather and health, primarily through distribution of weather contents for disaster prevention for smartphones.

## Support for sound living by providing essential information for everyday life

- Provision of information to "Life-Ranger Tenki" website
- Operation of the "Bio-weather Service" website
- Provision of weather forecasts, health forecasts and leisure-related information
- Development of applications for weather and marine forecasts

- Weather forecasts for baseball fields and event venues
- Provision/streaming of cooking recipes based on biometeorology "Weather Recipes"
- Provision of health risk information by monitoring indoor environment and personal health data



Mobile weather information site "Life-Ranger Tenki"





# Overseas Projects



## Infrastructure Management

### Infrastructure Management

Planning, feasibility studies, detailed design, construction management and maintenance management planning for a wide range of infrastructure development, with a focus on river management as well as coastal protection, harbours, roads/bridges and wastewater facilities.



Field surveys of water-related infrastructure (Bangladesh)

## Environmental Conservation /Creation

### Engagement with Global Issues

In response to global issues such as climate change, conservation of biodiversity, marine pollution and chemical contamination, we propose appropriate measures and solutions by liaising with international organisations and countries around the world and through information gathering and technical collaboration to produce a range of perspectives.



Massive beached plastics (the Philippines)

Support for sustainable improvement of people's lives using our rich experience and global perspective

### Comprehensive Disaster Prevention Management

Comprehensive disaster management projects which include a wide range of non-structural measures as well as equipment and facility-based measures such as planning and design for disaster prevention facilities in response to intensifying natural disasters, including abnormal weather events that are observed in many parts of the world due to climate change.



Hydrological observation for disaster prevention project (Mozambique)

### Capacity Building

Provision of capacity building support at each phase of the disaster management cycle i.e., disaster prevention, advance preparation, emergency measures and recovery/reconstruction by understanding the status quo and the challenges faced by disaster management bodies and systems at each level, such as the country in question, local governments and communities.



Training for disaster prevention personnel at local governments (Honduras)

### Project Formulation Support

Support for the identification and formulation of projects to provide solutions through accurate understanding of challenges and needs in the regions in question by consultation, information gathering and analysis with various stakeholders such as a counterpart country, international organisations and local governments.



Consultation with stakeholders concerning projects (Vietnam)

Contributing to the world through high-level consulting services that protect the global environment

### Conservation/Restoration/Creation of the Natural Environment

To protect the global environment into the future, we provide various consulting services for projects involved in conservation / restoration / creation of the natural environment through the application of underlying technologies such as field surveys/forecasting and assessment/policy formulation which we have accumulated domestically.



Investigation of the impact of accidents on ecosystems (Mauritius)

### Preservation of Regional Living Environments

To preserve a rich and sustainable living environment, we provide solutions according to the situations and challenges of regional communities through consultation and present data analysis with various stakeholders in underdeveloped regions with measures and infrastructure to cope with environmental pollution associated with economic growth.



Planning/construction of rural wastewater treatment facilities (China)

### Environmental and Social Considerations

Provision of consulting services to achieve environmentally harmonious development based on our wealth of experience and with advanced technologies in social infrastructure development, energy development and overseas business development for private companies in various parts of the world.




Briefing for public hearing (Indonesia)

# Research Centres

We provide high value-added services which meet the needs of our clients through innovative technologies for social infrastructure development and environmental conservation at the four core research centres.


Technological Development for Environmental Surveys/Analysis

**Institute of Environmental Informatics**



Technical Development in the Biological/Chemical Fields


**Institute of Environmental Ecology**



## Technical/Human collaboration


Technical Development in Food Safety and in Medical Fields

**Food and Life-Science Laboratory**



Technical Development Harnessing the Features of Subtropical Regions

**Research Institute on Subtropical Ecosystems**



# Corporate Profile

<b>Corporate Name</b>	IDEA Consultants, Inc.
<b>Founded</b>	May 1953
<b>Established</b>	September 1968
<b>Chairman</b>	Hideo Tabata
<b>President</b>	Akihisa Tabata
<b>Head Office</b>	3-15-1 Komazawa, Setagaya-ku, Tokyo 154-8585, Japan
<b>Capital</b>	3,173 million yen
<b>Employees</b>	1,013 (including part timers and advisors)
<b>Branch Offices Offices Training Centre</b>	Infrastructure Headquarters/Osaka Branch Office/Okinawa Branch Office/ Sapporo Branch Office/Tohoku Branch Office/Fukushima Branch Office/ Hokuriku Branch Office/Nagoya Branch Office/Chugoku Branch Office/ Shikoku Branch Office/Kyushu Branch Office/ Centre for Development of Information Technology/Fuji Innovation Centre
<b>Research Centres</b>	Institute of Environmental Informatics Institute of Environmental Ecology Food and Life-Science Laboratory Research Institute on Subtropical Ecosystems
<b>Overseas R&amp;D Centres</b>	IDEA R&D Centre (Thailand)
<b>Overseas Offices</b>	London (United Kingdom)/Bogor (Indonesia)
<b>Consolidated Subsidiaries</b>	Shin-Nippon Environmental Research Co., Ltd Okinawa Environmental Research Co., Ltd Towa Environment Science Co., Ltd IDEA (Beijing) Technology Co., Ltd Ides Inc. CREATEC Civil Engineering and Consultants Co., Ltd
<b>Major Business Partners</b>	Ministry of Land, Infrastructure, Transport and Tourism; Ministry of the Environment; Ministry of Defence; Ministry of the Economy, Trade and Industry; Ministry of Agriculture, Forestry and Fisheries; Ministry of Health, Labour and Welfare; Public/Business Corporations; Business Associations/Foundations; Local Authorities; Private Enterprises

※ As of January 2022