



SEISMIC HAZARD AND MONITORING

« Innovative solutions to protect your projects against future earthquakes »

With over 20 years of international experience, our Seismic Hazard and monitoring department offers a comprehensive range of solutions to assess earthquake impacts for all types of projects. Our expertise in applied seismology, combined with cutting-edge scientific approaches and innovative methodologies, is built on the experience gained from more than 300 studies conducted in both seismically active and stable regions.

We support you by leveraging our synergies and partnerships with a single objective in mind: optimizing your project from a technical and economic perspective while ensuring its safety against earthquakes

OUR SERVICES

« From hazard assessment to cross-disciplinary approaches for better seismic risk management. »

SEISMIC HAZARD ASSESSMENT

Probabilistic (PSHA) and/or Deterministic (DSHA) assessment, earthquake catalogue development, source and seismic activity characterisation, seismic hazard deaggregation, induced seismicity, response spectra and standard design, hazard mapping.

TIME-HISTORIES - SEISMIC GROUND MOTION

Time histories generation or development, selection on strong motion database, modification and adjustment of the signal content (spectral matching).

LIQUEFACTION HAZARD

Liquefaction hazard assessment, NCEER approach, numerical or probabilistic (PLHA), recommendations with geotechnical engineering.

SEISMIC MONITORING

Set-up, installation, monitoring/follow-up, design study and specific implementation on request.

R&D

Continuous development and scientific research monitoring, implication in national and international R&D activities or benchmarks.

SPECIFIC SOIL RESPONSE UNDER EARTHQUAKE

Analysis and consideration of soil conditions, Site Response Analysis (SRA) using numerical simulation in 1D, 2D, etc., in equivalent-linear, full non-linear domain, or RVT analysis, time or frequency domain, Soil-Structure Interaction (SSI).

FAULT STUDY - ACTIVE FAULT CHARACTERISATION

Fault identification and activity characterisation, field investigation and expertise, geological mapping, paleoseismic trenching, surface fault displacement hazard assessment (FDHA and/or PFDHA).

SEISMIC MICROZONATION

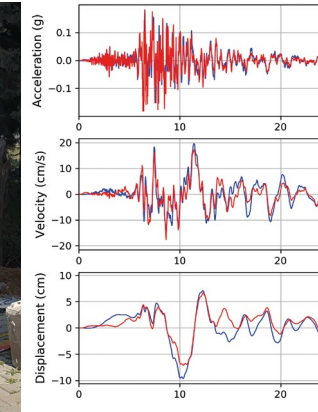
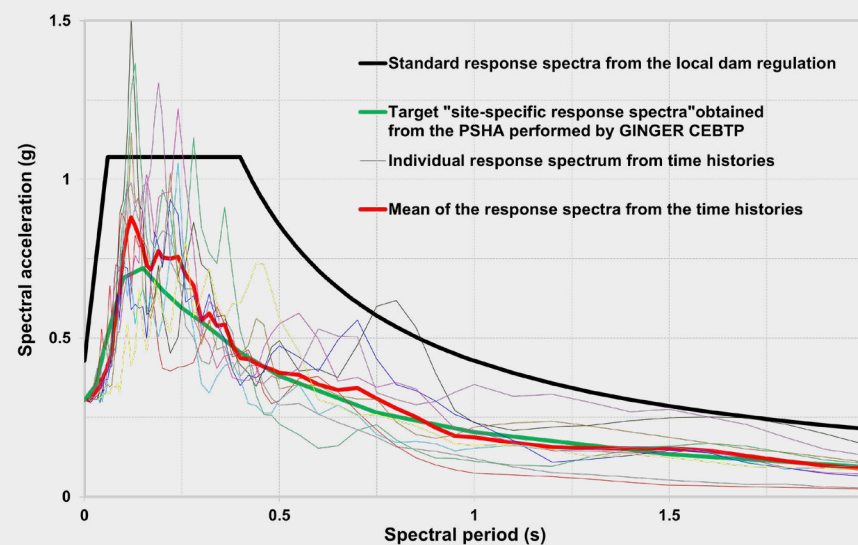
Qualitative and/or quantitative assessment and SIG mapping of local hazard at the scale of a site, a city or a region, PPR seismic, passive seismic measurement analysis from geophysical investigation.

DIAGNOSIS, EXPERTISE, CONSULTING

Technical expertise, client support, and peer review of seismic hazard studies, consulting services, training on regulations/standards and implementation of seismic hazard assessments.

TSUNAMI HAZARD

Quantitative analysis of tsunami hazard, desktop study and recommendations.



OUR FIELD OF ACTIVITY

« FROM PRE-FEED UNTIL VERIFICATION OF THE EXISTING »

CIVIL ENGINEERING AND TRANSPORTATION INFRASTRUCTURES

RAIL NETWORKS, AIRPORTS, PORTS, ROAD AND MOTORWAY NETWORKS, TUNNELS, BRIDGES, AND VIADUCTS.

URBAN DEVELOPMENT

URBAN PLANNING AND DESIGN, STATE ASSISTANCE SERVICES, LARGE-SCALE MEGACITY PROJECTS, PUBLIC AND PRIVATE BUILDINGS.

ENERGY AND INDUSTRY

NUCLEAR POWER PLANTS, INDUSTRIAL OR CRITICAL FACILITIES SITES, OFFSHORE AND ONSHORE OIL AND GAS PROJECTS, PIPELINES, ONSHORE AND OFFSHORE WIND FARMS, CO₂ OR H₂ STORAGE, SOLAR ENERGY.

ENVIRONMENT AND NATURAL RESOURCES

DAMS AND RESERVOIRS, HYDRAULIC BASINS, MINING OPERATIONS.

AREA OF EXPERTISE

« AN INTERNATIONAL RECOGNIZED EXPERTISE »

A HIGHLY QUALIFIED TEAM BRINGING SCIENTIFIC EXPERTISE IN :

ENGINEERING SEISMOLOGY AND SEISMIC HAZARD
SEISMIC/EARTHQUAKE DESIGN
SEISMOTECTONIC AND GEODYNAMIC
SEISMIC MONITORING
NUMERICAL SIMULATION
SCIENTIFIC AND IT DEVELOPMENT

PARTICIPATION IN NATIONAL AND INTERNATIONAL COLLABORATION PROGRAMS :

AFPS (FRENCH ASSOCIATION FOR SEISMIC ENGINEERING) :
WORKING GROUP, POST-EARTHQUAKE MISSIONS, SCIENTIFIC AND TECHNICAL ADVISORY (ELECTED EXPERTS)
INTERNATIONAL BENCHMARKS (SMATCH, PRENONLIN, GAMMA-GT),
R&D PROGRAMS (SIGMA)
CONTRIBUTION TO STANDARD EVOLUTION (AFPS, ALCESTE)

OUR ADDED VALUE

« A TEAM OF PASSIONATE EXPERTS READY TO ASSIST YOU »

A MULTILINGUAL INTERNATIONAL TEAM

PARTNERSHIP AND COLLABORATION

A NETWORK OF PARTNERS IN THE CROSS-DISCIPLINARY FIELDS OF SEISMIC ENGINEERING AND EARTH SCIENCES.

QUALITY REQUIREMENTS

OUR STUDIES ARE SUBJECT TO EXTERNAL EXPERT REVIEWS OR PEER REVIEWS IN OVER 80% OF CASES.

RESPONSIVENESS AND COMMITMENT

A SINGLE POINT OF CONTACT FOR EFFICIENT PROJECT MANAGEMENT.

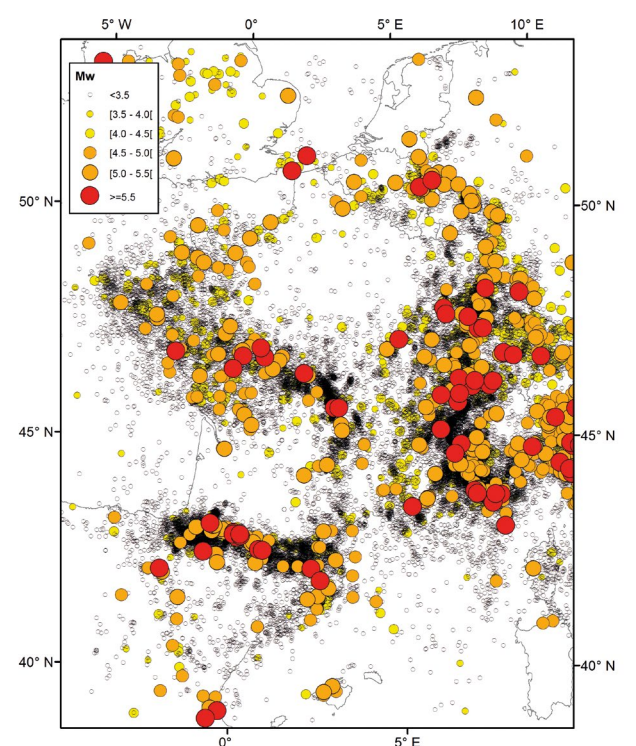
REGULATORY/STANDARD EXPERIENCE

ENSURING STUDIES CONDUCTED ACCORDING TO INTERNATIONAL SCIENTIFIC STATE-OF-ART, ADAPTED TO ACTUAL REGULATION AND STANDARDS.

MULTIDISCIPLINARY APPROACH

COLLABORATION WITH GEOLOGISTS, GEOPHYSICISTS, GEOTECHNICIANS, AND GEOMATIANS FOR A SUBSURFACE COMPREHENSIVE APPROACH AND THEIR RELATED HAZARDS

RISK AND UNCERTAINTY REDUCTION





Find out more about
our services on our
website



OUR REFERENCES AROUND THE WORLD



20 ZAC du Pujol 2
13 390 AURIOL
FRANCE
cebtp.division.sismique@groupeginger.com
www.ginger-cebtp.com

