

SEQUENCING | GENOTYPING | BIOINFORMATICS | SPECIES IDENTIFICATION

BIODIVERSITY

Genomic solutions to study, monitor and protect living diversity



FIND
YOUR GENOMIC
SOLUTION

GenoScreen



GENOSCREEN: GENOMIC EXPERTISE FOR LIFE SCIENCES

Founded in 2001, GenoScreen is a French company, a pioneer and a leader in the field of genomics and bioinformatics.

Thanks to our cutting-edge technology platforms and our expertise, we provide high-precision analytical solutions, notably in human health and nutrition, soil and plant health, animal nutrition and health, and biodiversity.

Building on this know-how, we also design and develop innovative kits and analytical solutions that meet demanding standards of robustness and reliability.

GenoScreen combines complementary technologies and expertise, from data generation through to interpretation.

Sanger sequencing

Barcoding
Targeted identification
Sequence validation

High-throughput sequencing

Illumina
Nanopore
PacBio

Fragment analysis

Microsatellites
STR/SSR
Genetic profiles

qPCR / dPCR

Detection
Quantification
Genotyping

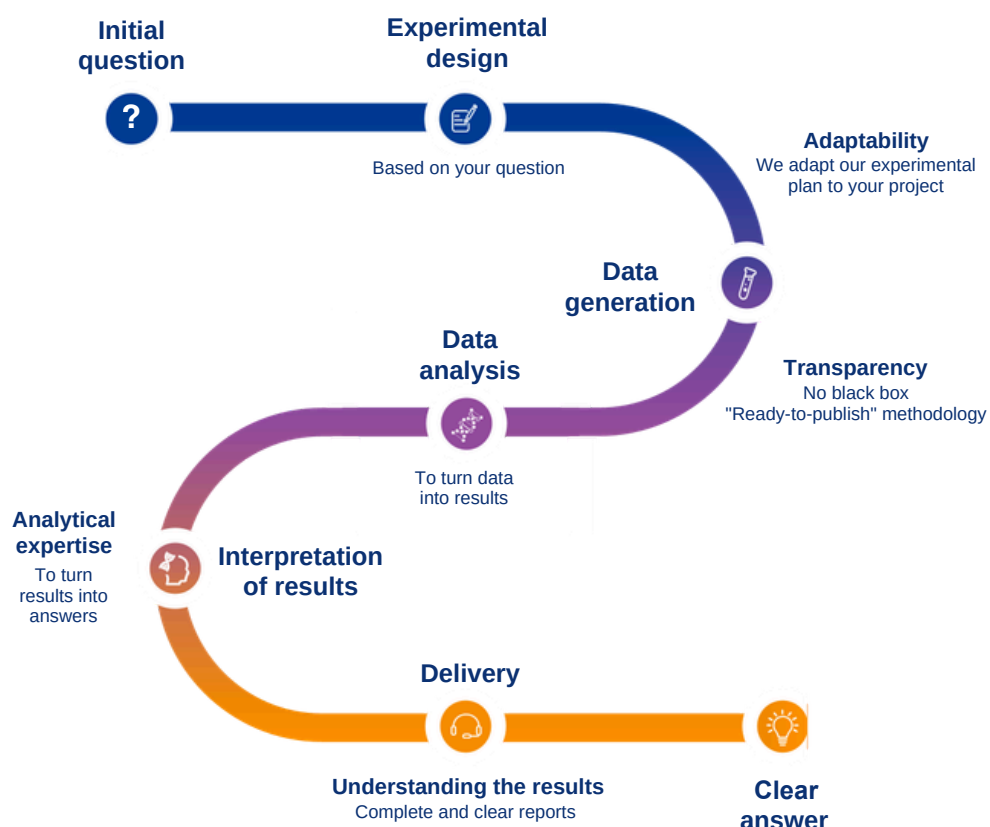
Bioinformatics, support and training

Analyses

Interpretation

Knowledge
transfer

MAKING GENOMICS ACCESSIBLE





GENOMICS FOR BIODIVERSITY

Genomics now makes it possible to analyse biodiversity at different scales: species, populations, communities and ecosystems.

From biological or environmental samples, it offers tailored solutions to identify organisms, monitor their genetic diversity, detect rare or invasive species and better understand the dynamics of life.

At GenoScreen, we bring more than 25 years of expertise to your projects, from fundamental research to operational applications.

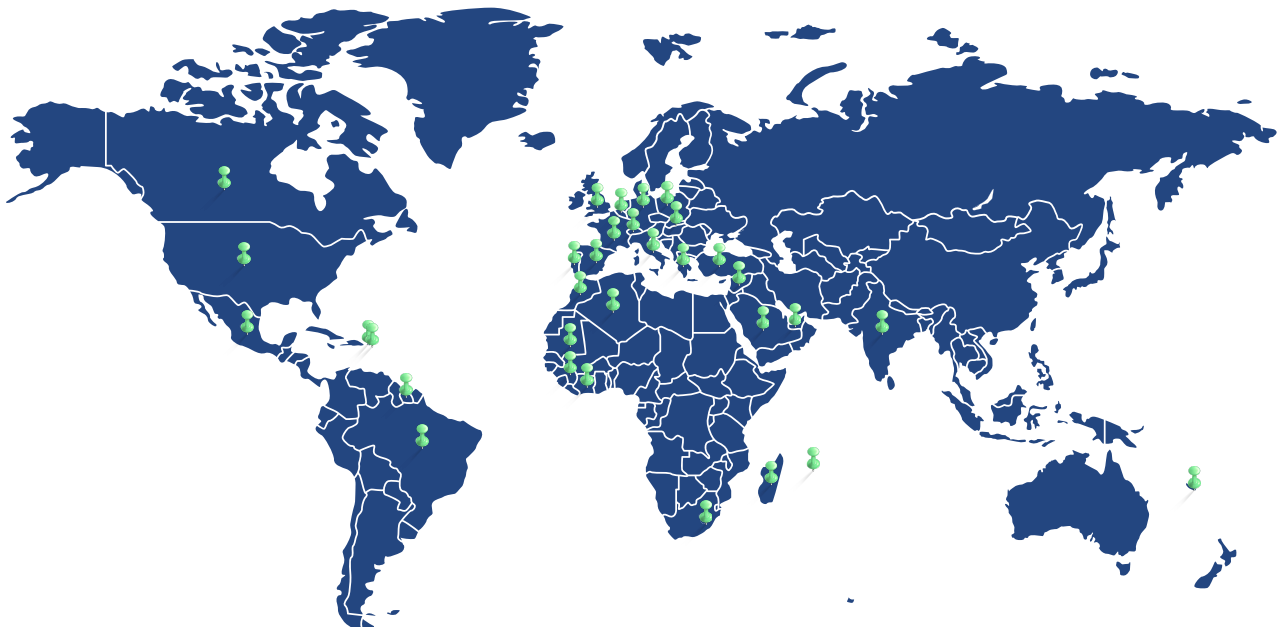
A wide range of clients and partners rely on GenoScreen for projects dedicated to studying, managing and preserving biodiversity.

**+ 1500
Projects**

More than 1,500 biodiversity-related projects have been carried out since 2020.

**+ 35
Countries**

Since 2020, GenoScreen has received biodiversity-related requests from more than 35 countries.
Map below





USE CASES

Your objectives may vary depending on your sector of activity and the challenges you face.

Zoos

Optimising the management of captive populations

- Analyse relatedness and inbreeding to optimise breeding programmes
- Determine the sex of individuals (birds)
- Verify origin and lineages
- Monitor host health and microbiota

Academics

Producing robust data for research

- Generate reference genomes for non-model species
- Study the genetic diversity of populations
- Analyse environmental adaptation mechanisms
- Explore evolutionary relationships

Aquariums

Ensuring the stability of closed ecosystems

- Identify or confirm a species (from eggs, larvae, fry, etc.)
- Monitor the biodiversity of tanks and detect unwanted species
- Monitor the microbiological quality of the water
- Manage reproduction and maintain genetic diversity

NGOs

Supporting conservation efforts

- Monitor threatened species and their distribution
- Detect and monitor invasive species
- Ensure species traceability (poaching, illegal trade)
- Produce data to support awareness-raising and decision-making

Conservation breeding centres

Maximising genetic diversity and species conservation

- Select breeding pairs according to their relatedness
- Track lineages over several generations
- Limit genetic drift and preserve diversity
- Validate parentage

Environmental consultancies

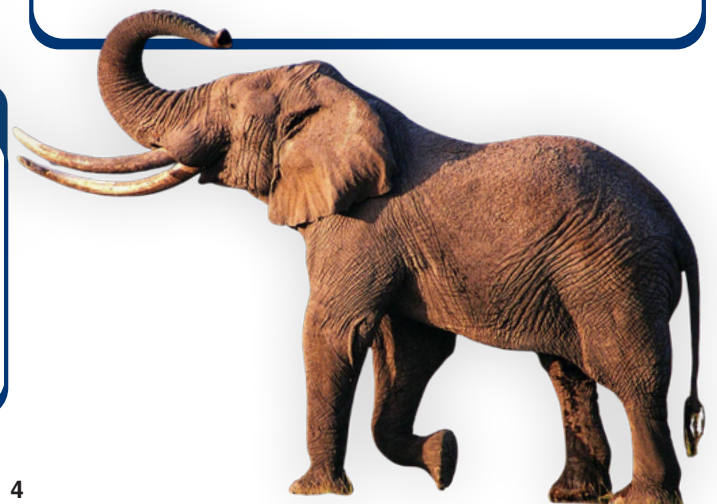
Supporting regulatory studies with robust data

- Carry out inventories and environmental impact studies
- Monitor project sites and compare ecosystem status (before and after intervention)
- Detect the presence of protected species
- Analyse soil and water biodiversity (microbiomes)

Nature parks & reserves

Monitoring biodiversity non-invasively

- Carry out species inventories without capture
- Detect rare or invasive species at an early stage
- Track the evolution of ecosystems over time
- Assess the impact of activities or developments (before/after)





OUR SOLUTIONS

We offer complementary solutions tailored to the specific needs of each project.

1

Species identification

DNA sequencing and barcoding

- DNA barcoding
- Metabarcoding

4

Advanced genomics

Genomics and transcriptomics

- Whole-genome sequencing: WGS
- Transcript analysis: RNA-seq
- Variant detection: SNPs, InDels

2

Ecosystem studies

Metagenomics and eDNA

- Shotgun metagenomics
- eDNA: targeted environmental sequencing
- Community profiling

5

Targeted detection

Species-specific qPCR and dPCR

- Design of species-specific primers
- Detection / quantification: qPCR / dPCR
- Analytical validation: sensitivity, specificity

3

Genetic diversity

Genotyping and population analysis

- Microsatellite genotyping (SSR)
- SNP genotyping: KASP / TaqMan
RAD/ddRAD-seq; GBS
- Parentage analysis and population structure

+500 species

GenoScreen has contributed to the development of microsatellite markers for more than 500 species.

[Scan to access the list](#)



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Custom services

Bespoke support for complex projects

- Protocols tailored to your needs
- Combination of several technological approaches
- Specific analyses



BIOINFORMATICS SUPPORT & TRAINING

Beyond data generation, we provide support, analysis and interpretation, and help you make the most of your results, while offering training tailored to your needs.



Bioinformatics

- Standardised or custom analyses
- Robust, publication-ready pipelines
- Interpretation of data in light of your objectives



Support

- Experimental design and structuring
- Project follow-up
- Combination of solutions and adaptation of protocols



Training

- Theoretical foundations and case studies
- Advanced training
- Work on your own data with personalised support





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