

Table S1: Examples of databases and related infrastructure that support genetic monitoring

Name	Description of database	Website
International Nucleotide Sequence Database Collaboration	Nucleotide sequences and bibliographic and biological annotations	www.insdc.org, <a href="https://www.ncbi.nlm.nih.gov/sra/">https://www.ncbi.nlm.nih.gov/sra/</a>
Genomes Online Database	Existing genomes and genome sequencing projects, and metadata	<a href="https://gold.jgi.doe.gov/">https://gold.jgi.doe.gov/</a>
Dryad Digital Repository	Ecology and genetic datasets	<a href="https://datadryad.org/stash/">https://datadryad.org/stash/</a>
Zenodo	Various genetic datasets	<a href="https://zenodo.org/">https://zenodo.org/</a>
The Global Biodiversity Information Facility (GBIF)	Geo-referenced species occurrences	<a href="https://www.gbif.org/species/search">https://www.gbif.org/species/search</a>
Genomic Observatories MetaDatabase	Metadata- standardized fields for location, habitat, sampling strategy- easily searchable	<a href="https://geome-db.org/">https://geome-db.org/</a> , <a href="http://diversityindopacific.net/">http://diversityindopacific.net/</a>
MacroPopGen	Geo-referenced population microsatellite data across Americas	<a href="https://figshare.com/articles/dataset/7207514/3">https://figshare.com/articles/dataset/7207514/3</a>
GenTree	Range-wide, climate change-relevant genetic and trait data in 12 tree species across Europe	<a href="http://www.gentree-h2020.eu/">http://www.gentree-h2020.eu/</a>
CartograTree	Genomic, phenotypic, and environmental data for forest trees	<a href="https://treegenesdb.org/context">https://treegenesdb.org/context</a>
Demiurge	For depositing older genotypic matrices in consistent standard format	<a href="http://www.demiurge-project.org/">http://www.demiurge-project.org/</a>
AgBioData	Genomic, genetic and breeding data for agricultural species	<a href="https://www.agbiodata.org/">https://www.agbiodata.org/</a>
The MAR Databases	Curated metadata and sequence databases for marine microbial and fungi species	<a href="https://mmp.sfb.uit.no/databases/">https://mmp.sfb.uit.no/databases/</a>
California Conservation Genomics Project	Ongoing project- no database yet- but will hold full genomes for 200+ species with similar sampling and markers	<a href="https://www.ccgproject.org/">https://www.ccgproject.org/</a>
FORGENIUS	Ongoing project- no database yet- but will hold phenotype, genotype and health data for numerous tree species	<a href="http://www.euforgen.org/about-us/news/news-detail/forgenius-a-new-project-to-revolutionise-our-understanding-of-forest-diversity/">http://www.euforgen.org/about-us/news/news-detail/forgenius-a-new-project-to-revolutionise-our-understanding-of-forest-diversity/</a>