

SOLUTIONS IN ECOLOGICAL ENGINEERING

for high vision energy projects.

Wind ● Photovoltaic ● Gas pipelines

Develop your project,
leave us the environmental,
social and climatic
compliance.



ases

Why work with Ases?

Ases is a **Franco-Mexican** company leader in **ecological engineering** that since **2002** provides comprehensive solutions at any stage of a project, from the preliminary phase to the dismantling phase, following the ARRC sequence (Avoid, Reduce, Restore, Compensate).



- 900 clients served.
- 1,100 developed projects.
- 110 professionals qualified to provide **assertive** and **immediate solutions**.
- Presence in **Latin America, Western Europe** and **North Africa**.
- 24 professional technical disciplines.

Brands of Ases:



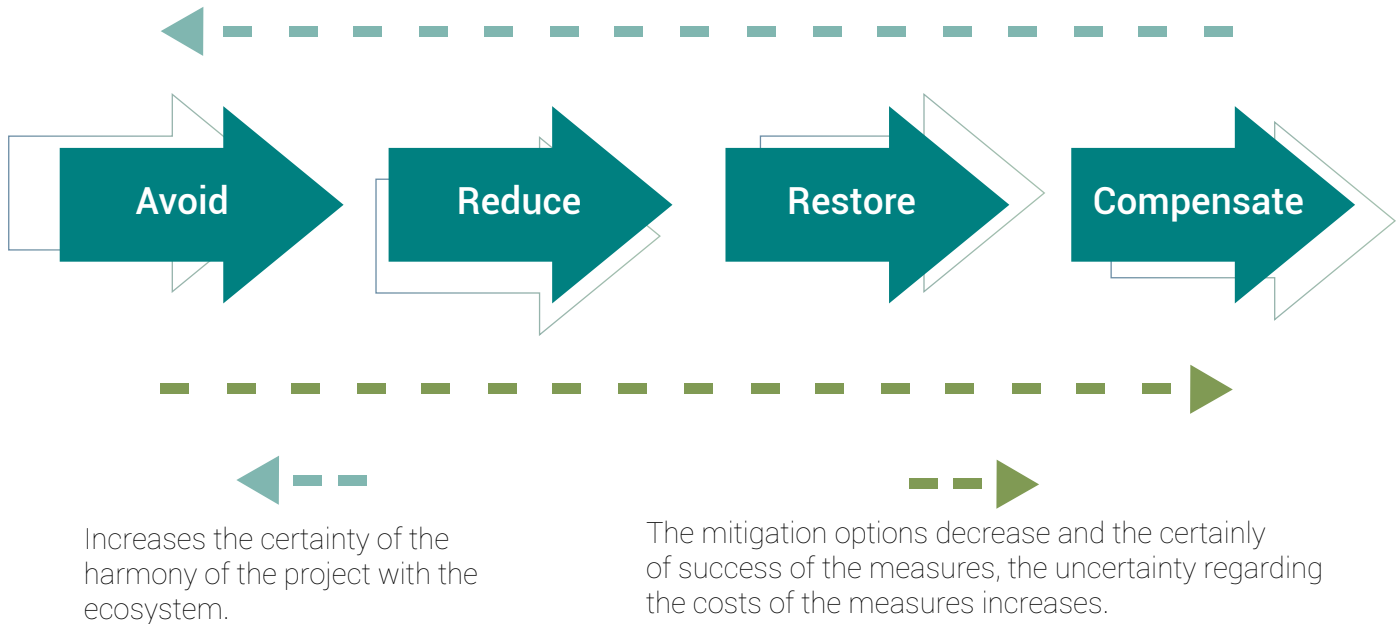
We help our clients fulfill their **environmental**, **social** and **climatic obligations**.

Some of our customers:



Ecological Engineering

Ecological Engineering is a discipline that has at the same time the **technical, scientific and operational** means to create **sustainable ecosystems**, in which, the conciliation and harmony between human societies and biodiversity are kept in balance through the **ARRC** sequence.



- Rescue and relocation of flora and fauna.
- Wildlife monitoring.
- Soil and water conservation works.
- Management, maintenance, reforestation of vegetation.
- Ecological inventories

Key figures of our flora rescue performance

Up to **10** hectares of a daily release.

Rescue up to **1,100** individuals per day.

Up to **8** linear km of daily release under temperatures up to 98.6 °F

Manual rescue of individuals up to **100** kg.

EcoBox

Ecobox is a suite of green engineering apps (toolbox) that helps environmental managers, supervisors, technicians and operational staff capture, share, view and manage field information in real time.

- Sampling
- Rescue
- Monitoring
- Supervision
- Security

Online environmental Screening y Scoping:

Screening

With the help of a geoportal, we determine the **environmental and social** requirements to develop a project, to facilitate a decision in function of the potential degree of environmental and social impact of the project and its location.

Scoping

With the help of a geoportal, we identify **specific circumstances** that influence the study area, to determine the guidelines for the Environmental Impact Assessment and Social Impact Assessment.

Preauthorization

We identify the environmental aspects and concerns that may stop the authorization of a project or its development.

- Due Diligence/ Red Flags Assessment.
- Environmental and archaeological feasibility.
- Flood risk studies.

Bureau of Studies

Solution adapted by project phase

Authorization

We evaluate the degree of compliance with the regulatory environmental responsibilities of the projects.

- Environmental impact studies
- Land use change studies
- Social impact studies.
- Hydrological studies.
- Studies, procedures and permits before other dependencies.

Operation

We evaluate the level of affectation and the environmental risks of the projects in operation. We propose measures according to the ARC protocol (Avoid, Reduce and compensate).

- Reports and supervision of environmental compliance.

Geospatial intelligence

Highly specialized service

Orthomosaic

High precision aerial photography (submetric).

Topography and planimetry

Surveys from drones.

Digital surface models

3D modeling with high level of detail.

Public politics

Formulation of normative instruments for planning and territorial ordering oriented to regulate or induce the different uses of soil and the productive activities in order to achieve a sustainable use of natural resources.

- Municipal Territorial Planning Programs.
- Risk Atlas.
- Sustainable Urban Development Plans.
- Territorial Ecological Planning Programs.
- Rural Community Regulations.
- Productive Management Programs.
- Municipal Climate Action Plans.

ASES EPC from the ARRC sequence

We help build responsible infrastructure projects by Avoiding, Reducing and Compensating for environmental impacts.

Phase 1

- Selection of project sites.
- Constitution of the specific company for each project (SPV).
- Technical and environmental feasibility.
- Negotiation with landowners.
- Conceptual engineering.
- Preliminary Due Diligence

Phase 2

- Preparation of the basics required for the project: permits, licenses and authorizations.
- Management, supervision and evaluation of supply agreements for main equipment and facilities.
- Technical Due Diligence.
- Topographic and geotechnical studies.
- Basic and detailed engineering of the project.
- Engineering of evaluation infrastructures and substations and power lines.

Phase 3

Environmental compliance in the construction phase (all aspects involved in the authorization of the construction phase).

Phase 4

Environmental compliance in the operation phase (all the aspects involved in the authorization of the operation phase).

Pollinator unit

Services:

- **Training:** handling, care and comprehensive protection of the pollinators.
- **Restoration of ecosystems** with the help of pollination assisted by hives to speed up recovery processes.
- **Compensation of environmental impact** through the management of hives in photovoltaic parks, taking advantage of the attraction of bees by magnetism.



Ases learning:

Platform for online training courses in ecological engineering, biodiversity and climate change.

- **Based on micro learning:** short lessons, focused on a single concept or idea and presented in a variety of ways to reinforce knowledge.
- Taught by highly qualified and **certified instructors** with year of experience in the practice.
- Training in total freedom, where the participant can decide when and how to advance according to their priorities and possibilities, removing the extra filling and leaving only the essential content.

Some of our courses:

- Principles of Ecological Engineering.
- Prevention of ophidian accidents
- Management of Geographic Information Systems.
- Identification and management of harmful fauna.
- Comprehensive management of hives.
- Environmental impact assessment.



Environmental communication agency

We help your organization transcend

We help your organization transcend through eco-responsible marketing strategies we lead our clients to achieve their environmental, social and climatic objectives.

1

Production of **TTL** environmental and climate awareness campaigns.

2

Design and management of social networks and audiovisual content.

3

Creation, management and positioning of eco-responsible brands.

- Full HD videos and motion graphics animations.
- Promotional items.
- Community management.
- Events and expos.
- Graphic and signage design.
- Brand identity.

Climpact Data Science

We help companies and territorial organizations to assess, adapt and manage their resilience to climate change, **identifying potential risks and opportunities** according to the needs of their projects:

- High degree of **spatial resolution** (1 km to 75 m).
- High degree of **ecological precision** (more than 10,000 species integrated into the models of biodiversity and dynamics of ecosystem services).
- Different **climate change scenarios**.
- **Different periods** (2030,2040,2050 and more).

Services of this unit:

Spatial Decision Support System (SDSS)

- Manage ecosystems and biodiversity in accordance with their dynamics and the objectives of our clients' projects.
- Select the best species, according to its resistance to climate change, for the restoration of ecosystems, ecological compensation, climate compensation, crops, revegetation and landscaping projects.
- Identify the possible spread of diseases that belong to ecosystems and biological vectors.
- Evaluate the productivity of services and species of ecosystems according to their use.

Artificial Intelligence

Generation of land use scenarios to help our clients **adapt their businesses** according to the properties and evolution of ecosystems.

Vulnerability assessment and resilience to climate change

Analysis of business and territorial organization activities in a context of climate change using evolution models of natural risks according to climate change scenarios (floods, forest fires, avalanches, shallow landslides, soil erosion...).

R&D project development

Helps in the development of research projects and the development of our clients' projects related to biodiversity, ecosystems, ecosystem services and land use management.

Ophidic accidents and toxicology

Ophidic accidents and toxicology



Training

- Prevention of ophidian accidents.
- Management of poisonous reptiles.
- Contingency for bee attacks.
- Rescue, safe containment and relocation of poisonous reptiles.

Advisory

Preparation of contingency plans for animal attacks of toxicological interest, species identification and use of equipment.

Sale of herpetological equipment and PPE

Prevention, safe handling and containment of poisonous animals.

Sale of antivenoms and medicine cabinets

Spiders (black widow and violinist), scorpions, bees and snakes.

Integral management and wildlife rescue



Urban wildlife patrol

"Safe home" service that includes:

- Containment, capture and relocation of wild life in the city and residential.
- Rescue and relocation of beehives and bee swarms.
- Control of toxic species (spiders, snakes, scorpions), vectors and pests.

Wild life animals patrol

Capture, handling and relocation of animals in semi urban and rural zones, agricultural and cattle lands.

2°much!

A product of Ases



Platform for **climate compensation** and playful learning from climate change.

We want to help a **million people** understand climate change and provide concrete ways to offset their **climate footprint** by **2030**.

- 1** We bring information to people's daily lives through **experiences, tools and recreational products** to raise awareness about the problem of climate change.
- 2** According to your daily habits, we estimate your **carbon footprint**.
- 3** Neutralize your emissions, we help you to be carbon neutral through **ecological restoration** and concrete actions of ecological engineering.
- 4** **Become an ambassador:** Help us spread the message against climate change and make more people carbon neutral.



www.2much.shop

Competences:

- We offer technical and operational solutions related to ecological and sustainable development in high vision projects.
- We are able to offer mitigation alternatives to the negative impact of any project on biodiversity, ecosystems and local communities.
- We can work with high complexity levels (technical, methodological, geographic, territorial epistemic, logistics...), in our day to day.

Guarantees:

- Expert staff in each phase of the project.
- Delivery on time or penalty for delay.
- Effective and pertinent support in each project.
- Security plans for each service.

**Right people, doing the right things,
in the right way.**

Work principles of ASES

There is an ethical dimension to ecological engineering, and that is that manipulating nature and ecosystems can pose fundamental questions when it comes to preserving, protecting or maintaining the balance of them.

1
Non-instrumentalization
of nature, ecosystems
or biodiversity.

2
No simplification or
trivialization of the ecological
complexity of ecosystems.

ECOEN
intervention

3
Non-modification of the
thermodynamic and evolutionary
of the ecosystem in an
irreversible way.

Engineering inevitably intervenes to **"manipulate"** one or more ecological dynamics, in such way that those interventions must be framed within the certain limits defined as the **ethical values of ecological engineering**.

Ases in the world

30

Scientific publications

On the consequences of climate change, biodiversity and its interactions with human activities.

40

International conferences

Our collaborators participate in events and conferences of scientific interest.

770

Public policy studies and programs

Since 2015, more than 750 studies, public policy programs and legal assistance for the private, government and NGO sectors have been elaborated by our study bureau.

330

Operation projects in Mexico

In the construction, mining, highway, photovoltaic, wind and hydrocarbon sectors.



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