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supporting the LIFE Programme

LIFE for Amphibians and Reptiles – past, present and future

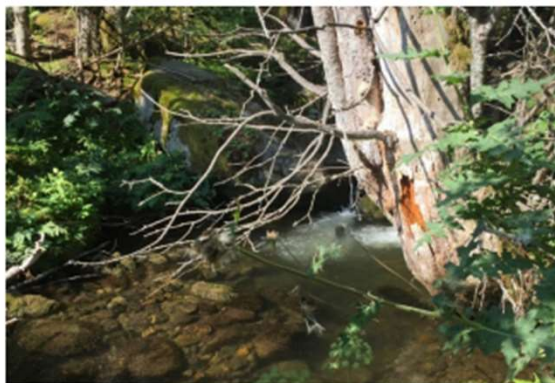
Teresa Catelani, ELMEN Monitoring Team

LIFE Platform Meeting: Amphibian and Reptile Conservation (ARC) - Challenges and Opportunities in Europe

Santander, 22 May 2024



The LIFE Programme



**LIFE is the main EU
fund for nature
conservation**



**€3 billion funding
spent on 1 800
projects**



**LIFE contributed to
the conservation of
>750 different
species and >6 000
Natura 2000 sites**

**LIFE I+II+III (1992-2006)
LIFE+ (2007-2013)
LIFE 2014-2020
LIFE 2021-2027**



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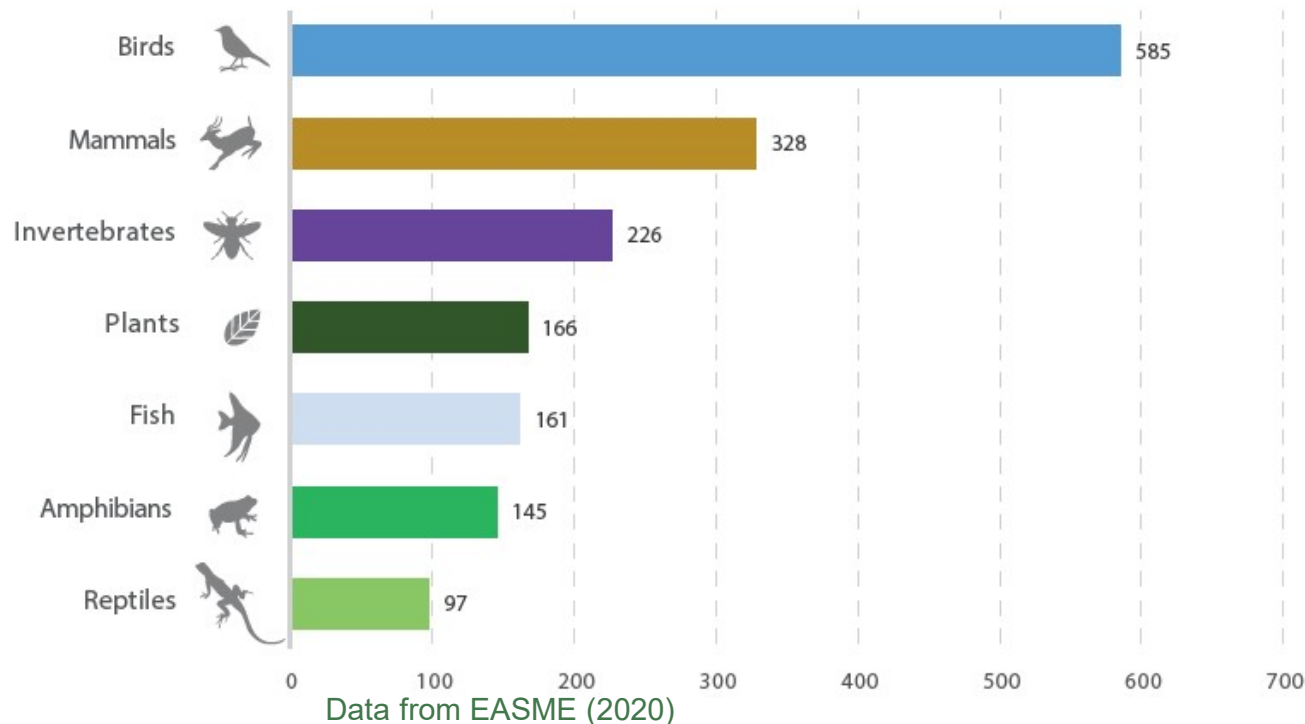


looking to the PAST



LIFE for Amphibians and Reptiles

Number of **LIFE projects** per group (co-financed in **1992-2017**)



- Majority of LIFE projects have focused on birds & mammals with a bias towards charismatic species (e.g. *U.arctos*, *L.lutra*)
- In its first 25 years, the LIFE Programme has supported some 250 projects across Europe which directly and indirectly benefit threatened amphibian and reptile species listed in the EU Habitats Directive and EU IUCN Red Lists.

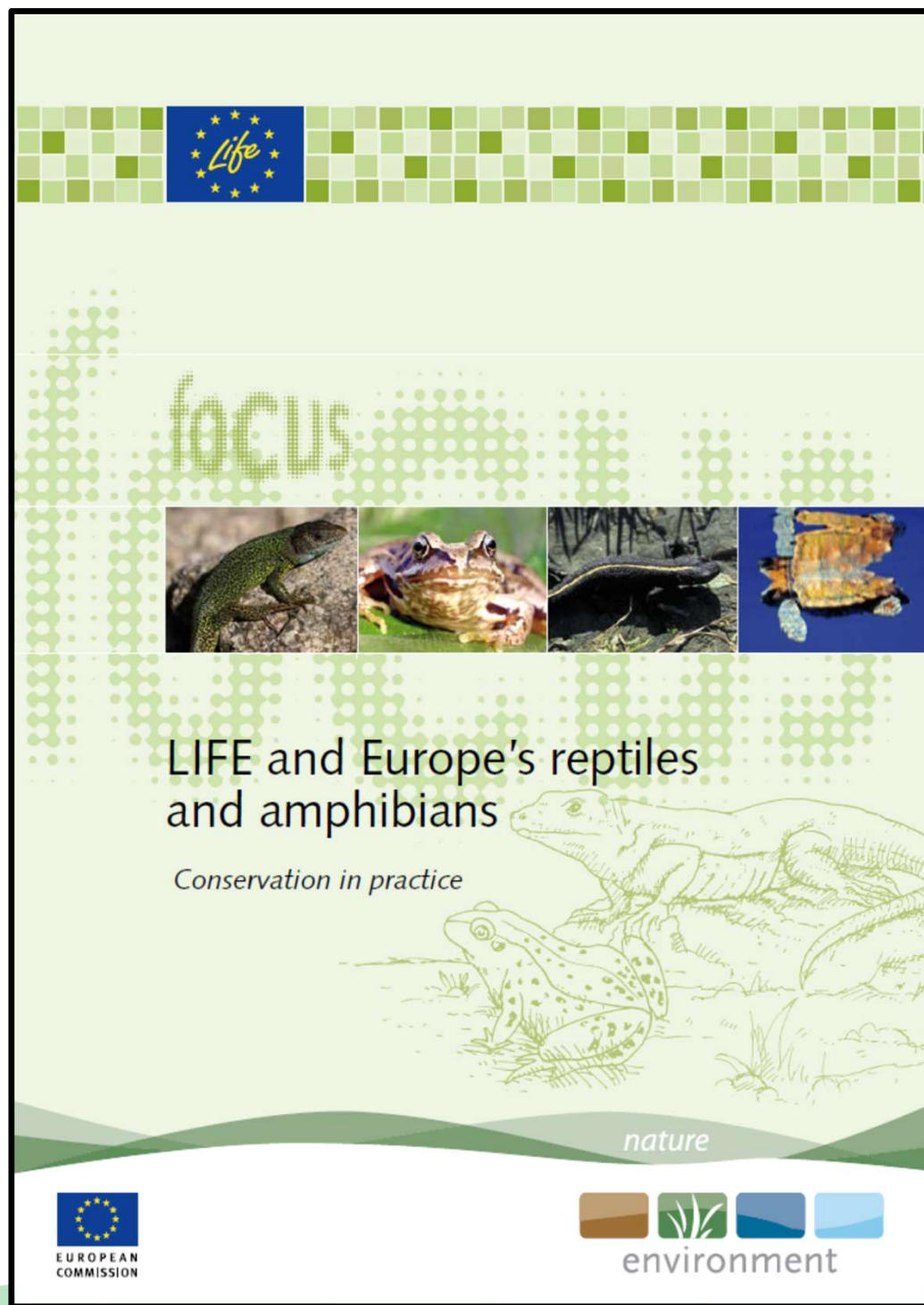
Almost **250 projects** on **A** and **R** (**14% of total**)

Both groups are **11.8% of all species** listed in Habitats Directive (resp. **A 4.8%** and **R 7%**)
However, much of the support has gone to a small number of frequently targeted species
(e.g. *Bombina variegata*, *Caretta caretta*, *Triturus cristatus*, *Emys orbicularis*)



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EU publication “LIFE and Europe’s reptiles and amphibians: Conservation in practice”

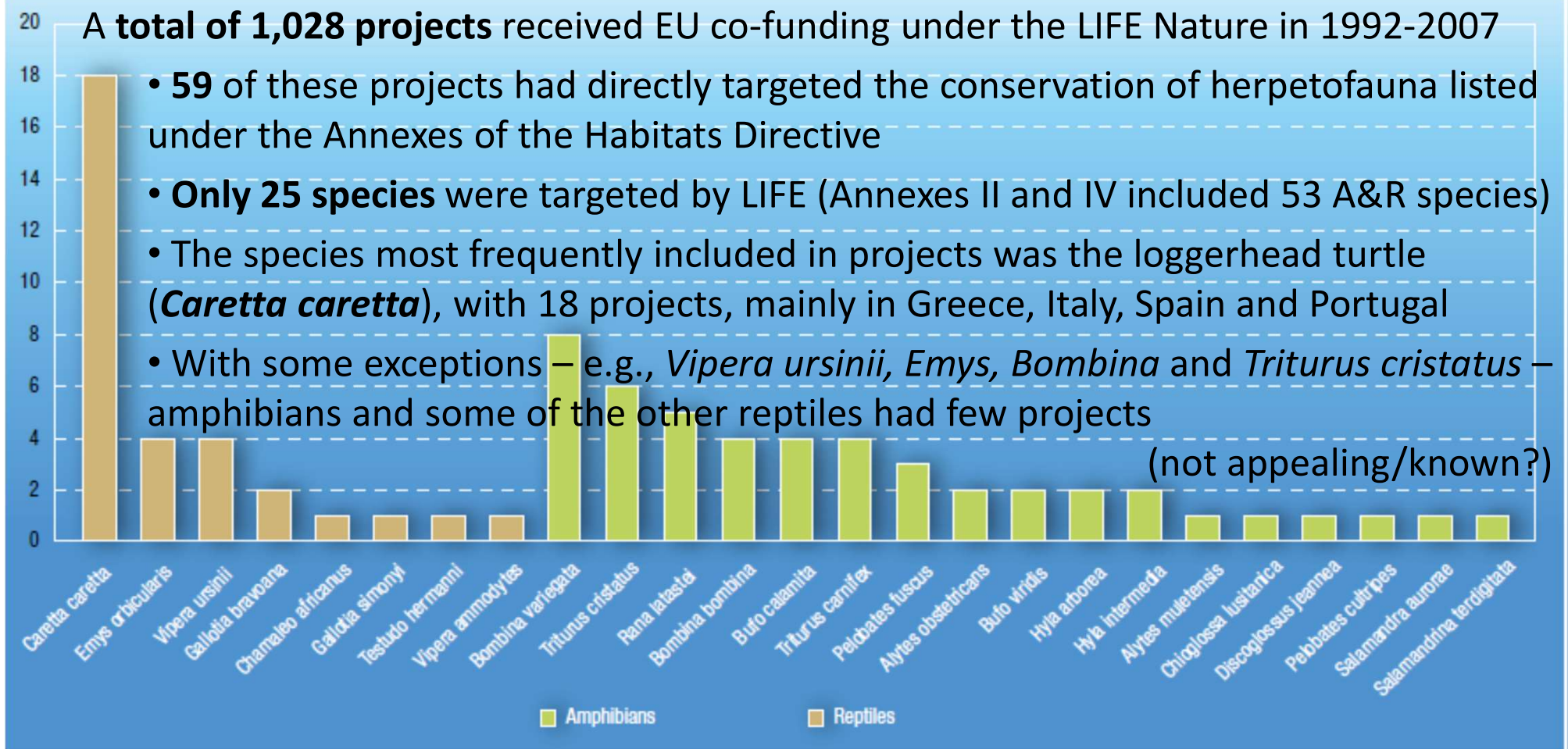
EUROPEAN COMMISSION
**ENVIRONMENT DIRECTORATE-
GENERAL**
2009



“LIFE and Europe’s reptiles and amphibians: Conservation in practice”

EC-DG ENV, 2009

Figure 1: Herpetofauna species targeted by number of LIFE projects



Source: LIFE projects database (2009)



“LIFE and Europe’s reptiles and amphibians: Conservation in practice”

EC-DG ENV, 2009

More than **two-thirds** of the projects targeting A&R were concentrated in **Italy, Spain and Greece**. This is to be expected, as the largest number of reptiles and amphibians is located in the **Mediterranean** biogeographical region. In addition, Italy and Greece are home to the main nesting sites of *C. caretta* in the EU

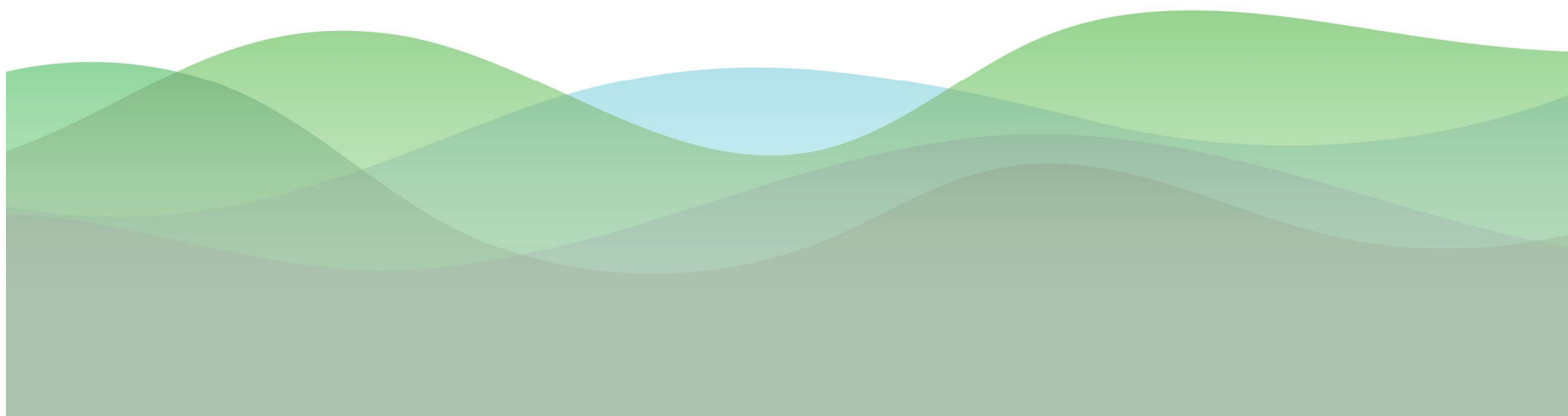


Source: LIFE projects database (2009)





looking at the PRESENT



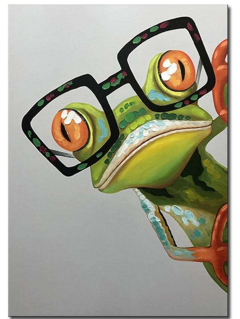
LIFE 2005-2022

LIFE projects to (directly and indirectly) conserve and restore herpetofauna **- PREMISES**

- Unfortunately, there are no more recent official studies/publications on LIFE projects for A&R
- Internal (ELMEN) mapping on monitored LIFE projects
- All LIFE projects from 2005 to 2022 have been mapped as far as possible by project selection in the LIFE public database
- Note: often covering more groups, topics & actions (especially LIFE IP Integrated Projects, very wide)
→ cumulative data should be taken with caution!

Only a dedicated and detailed study, selecting tasks specifically targeted to A&R, could allow appropriate analysis, included on specific budget lines actually mobilised only for them.

- As a consequence, only provisional and informal considerations, needing more in-depth analysis, can be shared at the moment.



LIFE 2005-2022

LIFE projects to (directly and indirectly) conserve and restore herpetofauna

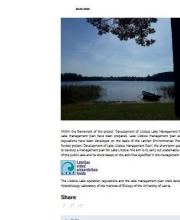
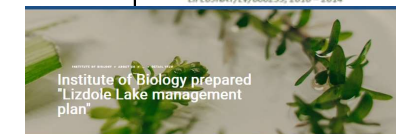
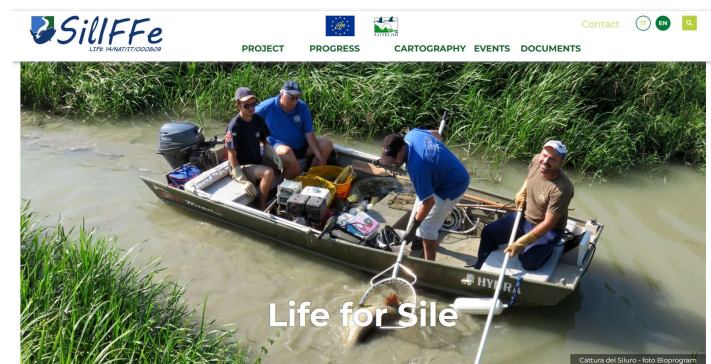
64 projects dealing with Amphibians and 56 on Reptiles

Some overlap both -and other- groups

(e.g. LIFE08 NAT/IT/000326 'Urgent pilot actions for amphibians, reptiles and chiroptera of Montenero'; LIFE19 GIE/LV/000857 LIFE FOR SPECIES in Latvia)

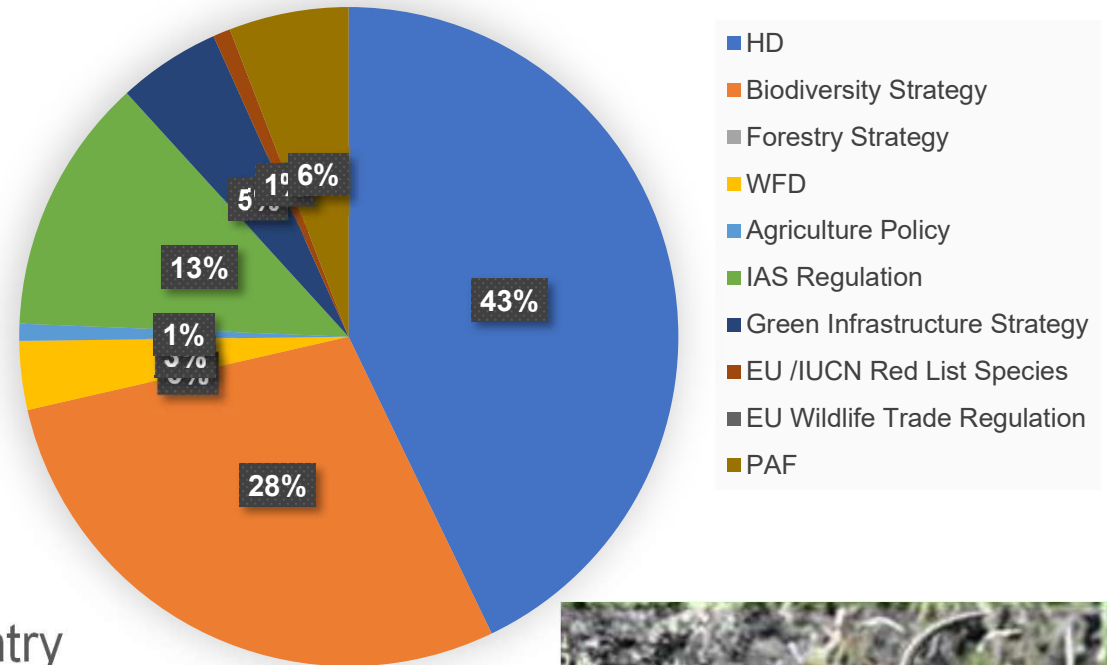
In total 103 projects! (60 with H) including 11 IPs

- Amounting ~600million (average project budget per year: over 5.5 million each - with IPs)
- Mainly NAT projects (some NGO, only 1 ENV)
- Equally focussing primarily HD species and restoration, along with associated habitats
- Addressing mainly HD sp/hab, Biodiversity Strategy, WaterFrameworkDirective and IAS
- Mainly by Italy, Belgium, Spain and Germany

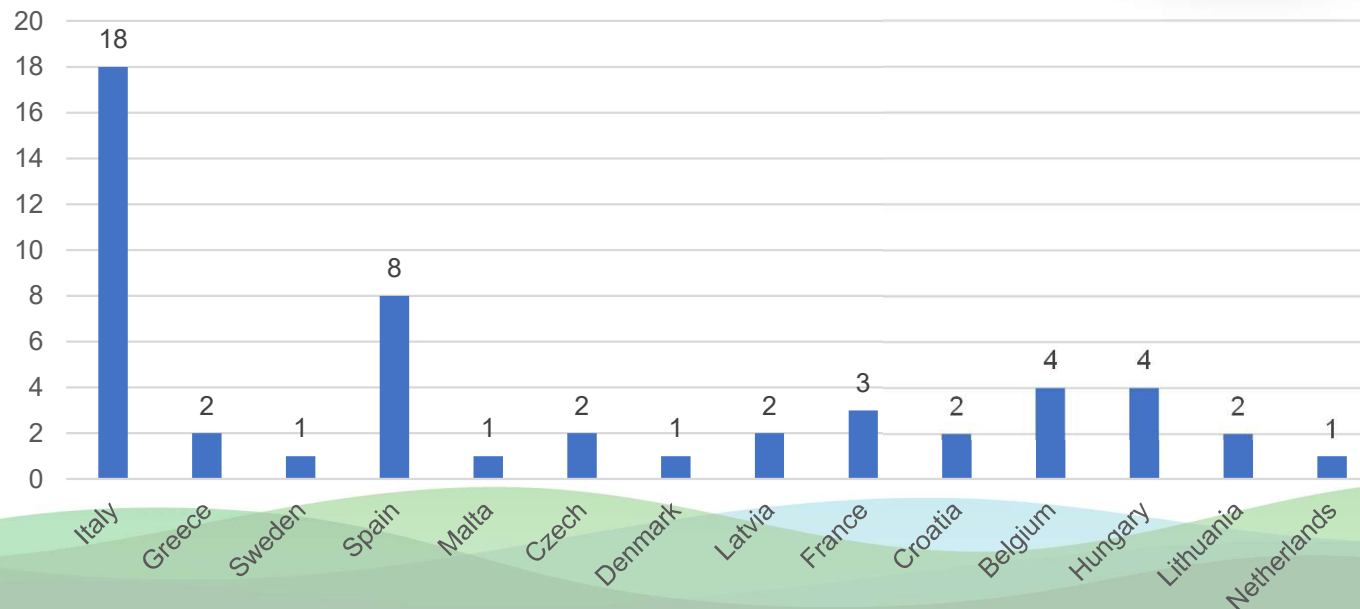


Reptile LIFE Projects 2005-2022

Project count per Legislation



Project count per Country



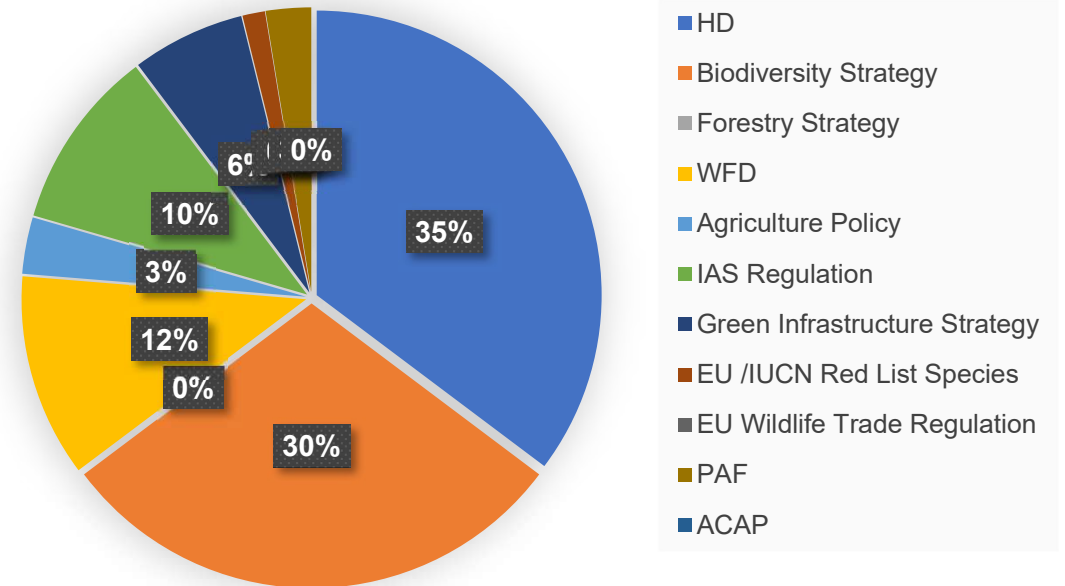
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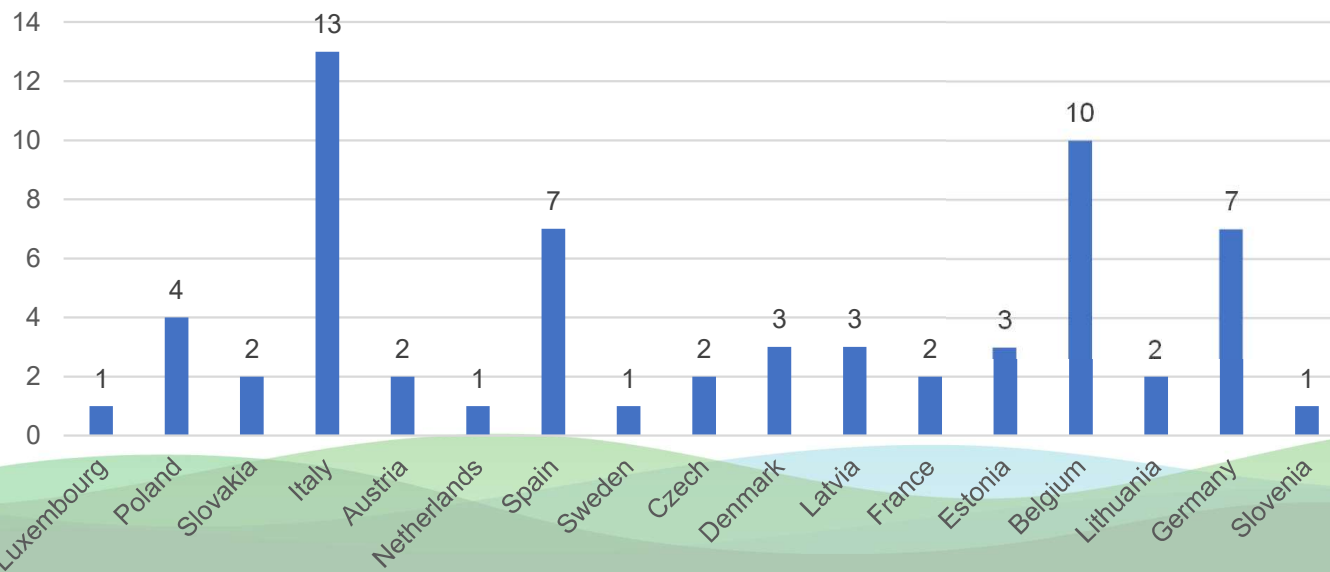
Amphibian LIFE Projects 2005-2022



Project count per Legislation



Project count per Country



LIFE 2005-2022

SPECIES addressed and their relevance



Targeting in total **53 species** (32 A and 21 R); more frequently:

Amphibians (64 projects tot):

- 19 projects** Crested newt (*Triturus cristatus*)
- 14** European fire bellied toad (*Bombina bombina*)
- 14** European tree frog (*Hyla arborea*)
- 10** Natterjack toad (*Bufo/Epidalea calamita*)
- 10** Moor frog (*Rana arvalis*)

All other species are targeted by less projects

Reptiles (56 projects tot):

- 15 projects** European pond turtle (*Emys orbicularis*)
- 6** Herman's Tortoise (*Testudo hermanni*)
- 5** Loggerhead turtle (*Caretta caretta*)
- 5** Orsini's viper (*Vipera ursinii*)
- 3** Mediterranean turtle (*Mauremys leprosa*)

All other species are targeted by 2 or 1 project

...BUT this covers only

- ~30% of A&R species listed on the **Habitats Directive**
 - **13 species** listed as **threatened** on the **European Red Lists** (2009): **3 CR** + **3 EN**
- Several** are **endemic** to Europe (e.g. *Triturus marmoratus*, etc.) **BUT** status **LC**...

CR Montseny brook newt (*Calotriton arnoldi*)

EN Appenine yellow-bellied toad (*Bombina pachipus*)

VU Gold-striped salamander (*Chioglossa lusitanica*)

VU Italian agile frog (*Rana latastei*)

CR La Gomera giant lizard (*Gallotia bravoana*), Aeolian wall lizard (*P. raffonei*)

EN *Caretta caretta*, Iberian emerald lizard (*Lacerta schreiberi*)

VU *Emys orbicularis*, *Vipera ursinii*, *Vipera latastei*

VU *Iberolacerta monticola*, *Mauremys leprosa*

PAST vs PRESENT LIFE

Outcome of comparisons



study on LIFE projects for A&R co-funded in the
period 1992-2007 (EU publication of 2009)

VS

preliminary overview of more recent projects
(LIFE 2005-2022)

=

focus does not seem to have changed!



THREATS to herpetofauna

Most of the pressure on these declining species comes from human destruction of their natural habitats, combined with climate change, pollution, and the presence of invasive species

A number of factors have led to the decline in numbers and range of reptiles and amphibians. Threats to herpetofauna include:

- Habitat change and destruction;
- Invasive alien species (IAS);
- Climate change;
- Disease (e.g. the chytrid fungus *Batrachochytrium*, a virulent pathogen that affects many amphibian species);
- Direct killing/collection (out of fear and superstition or for trade).



Photo: LIFE04 NAT/DE/000028

Red-eared slider (*Trachemys scripta elegans*)



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LIFE helps Europe's herpetofauna

AMPHIBIANS

The majority of LIFE projects targeting amphibian species included actions focused on **habitat restoration**.

The common factor in all these habitats is water.

Typical restoration actions include:

- encouraging an increase in habitat-specific vegetation by the propagation of water or grasslands plants;
- restoration of hydrological features and water quality;
- provision of ecological corridors between populations;
- erosion control;
- eradication of IAS (American bullfrog *Lithobates catesbeianus*, African clawed frog *Xenopus laevis*).

Awareness and communication,
including to limit collection
and killing



LIFE helps Europe's herpetofauna

REPTILES

LIFE projects targeting reptile species, have included similar bulks of actions, normally targeting either highly endangered reptile species with very small populations in restricted areas, or species with very specific requirements such as sea turtles.

Common features of the projects have included:

- preparatory actions – monitoring and assessment of the status of the wild populations (reptiles present a high percentage of 'unknown' status);
- habitat restoration;
- construction of captive breeding facilities;
- networking with other projects;
- and awareness campaigns
(e.g. to control collection of *Testudo hermanni*).



LIFE projects' actions for ARC

LIFE HUTURJAN (LIFE10 NAT/HU/000020)

Conservation of priority natural values in Turjánvidék
Natura 2000 site southern unit (closed in 2018)

Case where **land purchase** can be essential to ensure the protection of populations and conservation of their habitats in certain locations. This action is sometimes the only option in order to secure the habitat of certain species with restricted distribution areas, such as in the case of the *Vipera ursinii*



LIFE-AmphibienVerbund (LIFE15 NAT/DE/000743)

Improvement of habitats and population connectivity
for endangered amphibians in the city-region of Aachen
(still open)

Project also strengthening governance structures and stakeholder engagement to affect conservation and connectivity of areas **within (and outside) the Natura 2000 network**. These collaborations can result in the development of management and conservation plans with local support, also providing sustainability



LIFE15 NAT/DE/000743





looking at the FUTURE

insights from LIFE projects

LIFE24 calls!!!



Insights from past/present LIFE projects...



...Needs for future LIFE actions!

- LIFE is the main driver and catalyst for nature conservation in the EU, promoting dialogue and creation of stakeholder partnerships, enabling NGOs to build capacity in nature conservation work, and raising awareness.
- LIFE made significant progress on preparatory actions (e.g., preparation of surveys, protocols, mapping of species range and genetics, handling and reproduction techniques, monitoring methods) which are the basis for concrete conservation actions.
- However, we are still far away from reaching the final goal – good or adequate conservation status for these species. We need to expand our efforts to critical species and areas, continue identify and apply adequate conservation management measures for habitats and populations, tackle issues connected to adverse impacts of alien predators, parasite species, water quality, climate change, etc. and continue to raise knowledge.
- As a matter of fact, across Europe there are significant geographic, geopolitical and taxonomic biases in the quality of data available on the distribution and status of species (IUCN). Few European countries have any kind of organised and systematic monitoring for amphibian species for example, even though monitoring of amphibian species of European interest is now a statutory responsibility under EU legislation.
- Threatened species in Europe (amphibians in particular) require now urgent action to improve their status - while several LC species already receive some conservation attention, others do not. Priorities should be identified (species/areas to be targeted).



Insights from past/present LIFE projects...

...Needs for future LIFE actions!

- Species can be -and some already have been- saved from extinction (e.g., the Mallorcan midwife toad *Alytes muletensis* would almost certainly now be extinct were it not for intensive conservation efforts). However, recovery often remains precarious in the face of emerging threats such as invasive alien species, disease, and climate change.
- Restoration of habitats, establishment of management measures and site management plans have been -and still are- key for improving conservation status of amphibians and reptiles in LIFE projects. However, emerging needs concern reducing risk, controlling pollution, pesticide use and other damaging activities, which require integration with other policy sectors and approaches (e.g. CAP through agroecology and HNV farming criteria, CITES for illegal trade) and within territorial planning at a wider level.
- Planning the territory protection (identification of protected areas) may require long-term vision of potential trends due to the effects of climate change, as well as an adaptive management approach.
- Ensuring that European habitats and species are secure in the long term, needs to be combined at the political level, influencing the governance system; and sustained investment in species-, site- and landscape level conservation is needed from all European countries to truly integrate biodiversity conservation into all policy sectors.
- Despite regional differences, the above are common challenges, and key priorities seem to be: strengthening integration and coherence between EU biodiversity conservation and other policies, including land use and agriculture, climate mitigation and adaptation, water and fisheries, regional development, the internal market and global trade, public spending, and sustainable finance.



Needs for future LIFE actions...

...Call for proposals!

In brief, future focus should be on:

- Prioritise species and sites to address other endangered species and related habitats, in more vulnerable and/or mitigating areas
- Improvement of knowledge, including monitoring
- Adaptation to CC effects
- Prevention and control of IAS and disease
- Integration of policy and planning
- Sustainable finance





For further information:

EU publication “LIFE and Europe’s reptiles and amphibians: Conservation in practice” (2009)
<https://op.europa.eu/en/publication-detail/-/publication/a9e3512d-5c3f-4ad9-853e-9e7e4eec5fdb/language-en>

LIFE public database

<http://ec.europa.eu/environment/life/project/Projects/index.cfm>

LIFE Calls for proposals:

https://cinea.ec.europa.eu/programmes/life/life-calls-proposals-2024_en

To develop your ideas/proposal: National Contact Point (NCP)

https://cinea.ec.europa.eu/programmes/life/life-european-countries_en

ELMEN EEIG consortium:

<https://www.elmen-eeig.eu/>

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LIFE Platform Meeting on Amphibian and Reptile Conservation (ARC) Challenges and Opportunities in Europe

ARC is very complex and covers a wide range of issues intrinsically interconnected

Four **specific themes** on which EU funding programs focus their efforts:

- ❖ Climate change and Protected Areas.
- ❖ Invasive alien species.
- ❖ Addressing human pressure.
- ❖ Policy framework.

Expected **outcome**:

The ultimate goal of this PM is the production of a paper gathering all policy inputs emerged from the several instances, useful for the EC in order to improve the relevant framework!



LIFE Platform Meeting on Amphibian and Reptile Conservation (ARC) Challenges and Opportunities in Europe

MARINE TURTLES

It was difficult to include the marine turtles' topic in this Platform Meeting for different critical aspects linked to their habitat and related policy.

Therefore, we decided not to focus on marine turtles on this occasion.



It would be nice
(and we propose)
to have a specific
networking event
or seminar!!!





Lynne Barratt

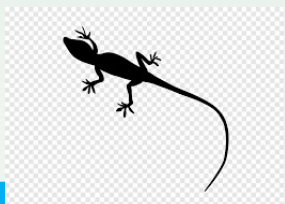


Karen Lunan

Ainhoa Darquistade



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Stefania Dall'Olio



Anne Calabrese

Thank you!!!

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