



©Matthieu Berroneau



## Progress report n° 1

LIFE15 NAT/FR/000864

Société Herpétologique de France

*Siège social :*  
MnHn – CP4 1  
57 Rue Cuvier  
75005 Paris

*Contact :*  
c/o Isabelle Chauvin  
Lieu-dit « Aux Tucoulets »  
32360 Peyrusse-Massas



LIFE Project Number  
**LIFE15 NAT/FR/000864**

Progress Report  
Covering the project activities from 01/09/2016 to 30/04/2017

Reporting Date  
01/06/2017

**LIFE CROAA – LIFE Control stRategies Of Alien invasive Amphibians**



**Data Project**

Project location:	France
Project start date:	01/09/2016
Project end date:	31/08/2022
Total budget:	3 430 179 €
EU contribution:	2 058 107 €
(%) of eligible costs:	60 %

**Data Beneficiary**

Name Beneficiary:	Société Herpétologique de France
Contact person:	Ms Myriam LABADESSE
Postal address:	c/o Isabelle Chauvin – Aux Tucoulets – 32360 Peyrusse-Massas
Telephone:	06 85 78 33 53
E-mail:	myriam.labadesse@lashf.org
Project Website:	<a href="http://life-croaa.eu">http://life-croaa.eu</a>





## PART 1

# Technical report

# 1. TABLE OF CONTENTS

2. List of figures and tables .....	5
3. List of key-words and abbreviations.....	6
4. Executive summary .....	7
4.1. General progress.....	7
4.2. Assessment as to whether the project objectives and work plan are still viable.....	8
4.3. Identified deviations, problems and corrective actions taken in the period .....	8
5. Administrative part .....	9
5.1. Coordination of the project .....	9
5.2. Management structure .....	10
6. Technical part .....	12
6.1. Progress per action .....	12
A. Preparatory actions, elaboration of management plans and/or of action plans .....	12
C. Concrete conservation actions.....	18
D. Monitoring of the impact of the project actions .....	24
E. Public awareness and dissemination of results.....	28
F. Project management .....	32
6.2. Envisaged progress until next report.....	36
6.3. Impact .....	36
6.4. Outside LIFE .....	37
7. Financial part .....	37
7.1. Financial management of the project .....	37
7.2. Costs incurred .....	38
7.3. Budget rectification.....	42

## 2. LIST OF FIGURES AND TABLES

### ▪ *Figures*

Figure 1. Management structure of the project from 01/09/2016 to 30/04/2017.....	11
Figure 2. Gantt-chart of the actions .....	35

### ▪ *Tables*

Table 1. Costs incurred per category of expenditure.....	39
Table 2. Costs incurred per action .....	40
Table 3. Budget rectification .....	42

### 3. LIST OF KEY-WORDS AND ABBREVIATIONS

BOAMP: Bulletin Officiel d'Annonces de Marchés Publics

CCT: Communauté de Communes du Thouarsais

CDPNE: Comité Départemental de Protection de la Nature et de l'Environnement du Loir-et-Cher

CEN: Conservatoire d'Espaces Naturels

CN: Cistude Nature

COTITA: CONFérence Technique Interdépartementale des Transports et de l'Aménagement

CROAA: *Control stRategies Of Alien invasive Amphibians*

EASME: *Executive Agency for the Small and Medium-sized Enterprises*

FCBN: Fédération des Conservatoires Botaniques Nationaux

GT-IBMA: Groupe de Travail sur les Invasions Biologiques en Milieu Aquatique

JOUE: Journal Officiel de l'Union Européenne

MnHn: Muséum national d'Histoire naturelle

ONCFS: Office National de la Chasse et de la Faune Sauvage

PhD: *Philosophiæ doctor*

PNRLAT: Parc Naturel Régional Loire-Anjou-Touraine

PNRLG: Parc Naturel Régional des Landes de Gascogne

PNRPL: Parc Naturel Régional Périgord-Limousin

SEBB: Syndicat d'Entretien du Bassin du Beuvron

SHF: Société Herpétologique de France

UA: Université d'Angers

IUCN: International Union for the Conservation of Nature

# 4. EXECUTIVE SUMMARY

## 4.1. General progress

The LIFE CROAA project began on the 1st September 2016. Eight months after, we kept the planned time schedule, despite some small delays that have no impact on actions implementation.

The project start was highlighted by the organization of a monitoring meeting bringing together all the associated beneficiaries. The first activities have consisted in the preparation of concrete conservation actions and communication actions. The concrete conservation actions began only a few weeks before the drafting of this report.

The progress of the actions over the period covered by this report, from 01/09/2016 to 30/04/2017, is summarized below. More details are given in section "5.1. progress per action".

### ▪ Actions A

Action A1 aims to prepare field actions. Technical and scientific protocols are being finalized and validated. Requests for administrative authorizations for the accidental capture of protected species of Amphibians and for the destruction of *Lithobates catesbeianus* and *Xenopus laevis* have been filed with the local authorities. Owners of colonized ponds were contacted for authorization to carry out eradication activities. Training of personnel involved in the eradication and monitoring actions is planned for May to July.

Action A2 consists of updating the distribution of *L. catesbeianus* and *X. laevis* in France. The SHF has issued a tender for the purchase and analysis of approximately 900 environmental DNA kits. The samples will be carried out on the field from May for *X. laevis* and July for *L. catesbeianus*.

Action A3 aims to develop new techniques for fighting against *L. catesbeianus* and *X. laevis*. The first reflections are in progress.

Action A4 aims to identify an optimal strategy for managing large nuclei of *L. catesbeianus* and *X. laevis*. The first field phases began in April.

### ▪ Actions C

Action C1 aims to develop an early detection and evaluation system. Several tools are being developed. A new tool allowing the general public to share their observations of exotic Amphibians will soon be available on the project website. Contacts have been made with various structures for the development of a smartphone application.

Action C2 concerns the small nuclei of *L. catesbeianus* (Sologne, Dordogne, Bassin d'Arcachon). The eradication actions began in Sologne and will start from May for the Dordogne. No eradication action is planned in 2017 on the Bassin d'Arcachon.

Action C3 concerns the large nuclei of *L. catesbeianus* and *X. laevis*. Trapping actions have begun for *X. laevis* but not yet for *L. catesbeianus*.

Action C4 will start in 2019.

- **Actions D**

Action D1 aims to evaluate the effectiveness of concrete conservation actions. To do this, indicators will be monitored. The action has not yet begun.

Action D2 aims to evaluate the restoration of ecosystem functions by monitoring the autochthonous species of Amphibians and aquatic invertebrates. First monitoring was conducted for indigenous Amphibians in March / April. Monitoring of invertebrates will begin in July.

Action D3 concerns the socio-economic evaluation of the project. The action has not yet begun.

Action D4 concerns the LIFE project indicators. This action has not yet started.

- **Actions E**

Action E1 aims to develop a communication plan and many communication tools. The graphic charter and the project logo have been produced. A first version of the website is available at: [www.life-croaa.eu](http://www.life-croaa.eu)

Action E2 aims to raise public awareness of the problem of invasive alien Amphibians. SHF participated in various events that helped communicate about the project and raise awareness among the general public. It also participated in meetings with the GT-IBMA and the Ministry of the Environment.

- **Actions F**

Action F1 concerns the overall coordination of the project. SHF recruited a technical coordinator and an administrative and financial coordinator. Several tools have been sent to the associated beneficiaries to ensure regular and rigorous monitoring of actions progress and expenditure. The associated beneficiaries also have the necessary recruitment procedures for the implementation of the actions. Two monitoring committees have been organized since the launch of the project (13<sup>th</sup> October 2016 and 11<sup>th</sup> April 2017).

Action F2 is scheduled for 2022.

Action F3 is scheduled for 2022.

## **4.2. Assessment as to whether the project objectives and work plan are still viable**

The project has just begun and no major problem has been identified. The objectives as described in the proposal should be achieved. The work plan has not been changed.

## **4.3. Identified deviations, problems and corrective actions taken in the period**

The administrative and financial coordinator of the project has been recruited later than expected due to a lack of suitable applicants (January 2017 instead of September 2016). Before the recruitment, the technical coordinator was responsible for the administrative and financial aspects during the first 4 to 5 months of the project which delayed the implementation of some actions, and the elaboration of certain deliverables. This mainly concerns preparatory and communication actions:



- *Action A1.* Four protocols had to be drafted, only one is completed, the three others are not finalized. However, this has no impact on the implementation of the associated concrete conservation actions. Field actions for which protocols are necessary have not yet begun. New milestones have been set to ensure the protocols finalization before field actions begin. Action A1 required the submission of administrative requests for the authorization of accidental capture of protected species of Amphibians. These requests are made by each of the associated beneficiary. Some have been sent late to the competent authority. However, all beneficiaries should get them in the coming weeks.
- *Action E1.* The project website development has been delayed. A first version is now available. It will be amended in the coming weeks. The graphic charter and the project logo were also created later than planned which delayed the development of various communication media (information panels, brochures ...). New milestones have been set. The communication plan is also being drafted.

These delays are recoverable and have no expected effect on the completion of the objectives set out in the proposal.

## 5. ADMINISTRATIVE PART

### 5.1. Coordination of the project

The Société Herpétologique de France (SHF), project coordinator, has organized two monitoring committees since the beginning of the project.

The first took place in Niort on 13<sup>th</sup> October 2016 and brought together of all beneficiaries representatives. The agenda included administrative and technical items.

Concerning the administrative point, the SHF attended to the Kick-Off Meeting organized by the EASME in Brussels and was therefore able to communicate EASME expectations to the associated beneficiaries. The various monitoring tools to be put in place were explained.

Concerning the technical point, the actions have been reviewed and discussed. The report is available in Annex 1.

The second monitoring committee was held on 11<sup>th</sup> April 2017 in Blois. The project progress has been discussed. Each associated beneficiary expressed his concerns related to the actions implementation. This second committee was also the opportunity for the associated beneficiaries to meet Isabelle Chauvin, administrative and financial coordinator, hired since January 2017 at the SHF. Following the sending by emails of various monitoring tools by I. Chauvin to all beneficiaries, the administrative and financial monitoring of the project was discussed. The report is available in Annex 2.

The first visit of Frédéric Brochier, NEEMO monitor, took place on the second monitoring committee. It was organized in two parts: the first concerned technical aspects and was associated with a field trip, and the second dealt with the administrative and financial aspects. The reports are available in Annexes 3 and 4.

Other meetings and technical working groups have also been organized since the beginning of the project:

- 15/02/2017: Meeting between CN and PNRPL in La Coquille (Dordogne),
- 07/03/2017: Workgroup by video conference between SHF, CDPNE, CN, PNRPL and UA about the monitoring protocol of native Amphibians (the report is available in Annex 5),
- 08/03/2017: Meeting between CCT, PNRLAT and UA about the actions which must be implemented for *X. laevis* in Saumur (Maine-et-Loire),
- 23/03/2017: Meeting between SHF, CN and PNRLG about the eradication actions against *L. catesbeianus* in Le Teich (Gironde).

Phone and e-mail exchanges have been frequent between Société Herpétologique de France and the associated beneficiaries.

## 5.2. Management structure

No changes are to be reported in the project partnership.

Please see below a diagram showing for each beneficiary the names of the persons involved in the implementation and management of the project from 01/09/2016 to 30/04/2017. The meaning of the acronyms is specified on page 5.



# SHF

## Technical overall coordination

Myriam LABADESSE

## Administrative and financial overall coordination

Isabelle CHAUVIN

## Technical personal

Christophe EGGERT

### CCT

#### Coordination

Didier PONCET

#### Technical personal

Rodolphe OLIVIER  
Charlotte BOUIN  
Students

#### Administrative and financial personal

Florence CHOLLET  
Didier PONCET

### CDPNE

#### Coordination

Gabriel MICHELIN

#### Technical personal

Gabriel MICHELIN  
Agathe LEGRAND  
Jean-Louis NICOLLE\*  
Patrice VILLEDIEU\*  
Franck CLUNY\*  
Thierry JOBARD\*

#### Administrative and financial personal

Pascale COPPIN  
Myriam LE QUERE  
Nathalie PROCUREUR

### CN

#### Coordination

Christophe COIC

#### Technical personal

Matthieu BERRONEAU  
Luc CLEMENT  
Students

#### Administrative and financial personal

Philippe BELLO

### PNRLAT

#### Coordination

Bastien MARTIN

#### Technical personal

Bastien MARTIN

#### Administrative and financial personal

Bastien MARTIN

### PNRLG

#### Coordination

François BILLY

#### Technical personal

Nathalie VILLAREAL  
Raphaël JUN

#### Administrative and financial personal

Christine ROBLETZ

### PNRPL

#### Coordination

Manon DESPEAUX

#### Technical personal

Manon DESPEAUX

#### Administrative and financial personal

Frédéric DUPUY  
Fabienne FAUCHER  
Marie-Pierre VALEIX

### UA

#### Coordination

Jean SECONDI

#### Technical personal

Jean SECONDI  
Giovanni VIMERCATI  
Students

#### Administrative and financial personal

Jean-François PACAUD

FIGURE 1. MANAGEMENT STRUCTURE OF THE PROJECT FROM 01/09/2016 TO 30/04/2017.

## 6. TECHNICAL PART

### 6.1. Progress per action

For each action, a table reports the progress and difficulties encountered, and lists the milestones and deliverables. A colour code, as shown below, is assigned to each action:

Upcoming	Started	In progress	Completed
----------	---------	-------------	-----------

The milestones have been revised for each action and sub-actions: they have been refined in relation to the proposal. In the proposal, milestones are attributed to actions but not to sub-actions.

For each milestone listed below, the date indicates when they will be reached.

#### A. Preparatory actions, elaboration of management plans and/or of action plans

- A1. Preparation for field actions

A1.1. DRAFTING OF SCIENTIFIC AND TECHNICAL PROTOCOLS		In progress
<b>Duration</b>	Foreseen start date: 01/09/2016 Actual start date: 01/01/2017	Foreseen end date: 30/06/2017 Actual (or anticipated) end date: 01/07/2017
<b>Progression</b>	Several protocols must be drafted: <ul style="list-style-type: none"> <li>- Inventory protocol, conducted as part of the A2,</li> <li>- Protocol for the monitoring of native Amphibians and aquatic invertebrates, set up as part of the action D2,</li> <li>- Collection of control techniques, applied under actions C2, C3 and C4.</li> </ul> The protocol for the monitoring of native Amphibians has been drafted by the SHF and sent to the beneficiaries. The others protocols are in preparation.	
<b>Potential problems</b>	The SHF, responsible for drafting, took a little late. This delay is due to the late recruitment of Isabelle Chauvin, financial and administrative Manager, forcing the technical coordinator to spend more time than planned on the administrative aspects of the project during the first six months. Protocol of native Amphibians monitoring had to be sent to the beneficiaries at the end of 2016, but it was sent at the end of March 2017. The other protocols are being drafted. The survey protocol for the <i>X. laevis</i> has been validated by the scientific committee. For the bullfrog, the survey must start in June or July 2017 because this species is not active before. A survey protocol has been proposed and has to be validated. The delay has not consequences for set up the action A2. A first version of the protocol for the monitoring of native aquatic invertebrates has been drafted. It must be validated. The first monitoring of aquatic invertebrates is planned for July. The delay has not consequences for the D2 action set up. The collection of control techniques must serve to the additional staff involved in the actions C2 and C3. The eradication and control actions have started in the nucleus of <i>L. catesbeianus</i> in Sologne by the CDPNE and in the nucleus of <i>X. laevis</i> in Deux-Sèvres by the CCT. These two beneficiaries have set up such actions for several years and have the required experience to proceed. The delay has not consequences for the C2 and C3 actions set up.	

Timetable	<i>Milestones</i>	<i>Expected date</i>
	Drafting and validating of the protocol of inventory	30/06/2017
	Drafting and validating of the protocol for the monitoring of the native aquatic invertebrates	15/06/2017
	Drafting of the collection of control techniques	30/06/2017
Objectives	The objective of this sub-action is to distribute to the beneficiaries all the protocols which will be used for the concrete conservation and monitoring actions before their start. We think this objective will be achieved.	
Deliverables available in annex	Protocol for the monitoring of the native Amphibians (Annex 6)	

A1.2. PRELIMINARY ADMINISTRATIVE PROCEDURES			In progress
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/01/2017	Foreseen end date: 30/06/2021 Actual (or anticipated) end date: 30/06/2021	
Progression	<p>This action allows:</p> <ol style="list-style-type: none"> <li>1. Obtaining administrative authorizations for accidental capture of protected species of Amphibians Such applications are sent by each associated beneficiary to the corresponding local authority. Applications are nominative and may be valid for one or several years. The SHF drafted a briefing note presenting the project that the associated beneficiaries attached to their application (Annex 7). Once the applications have been validated, the local authority transmits a permit to the applicant. The authorizations already obtained at the time of writing of this report are in Annex 8. Only the PNRLG and the CCT have not yet received them.</li> <li>2. Obtaining administrative authorizations for the destruction of <i>X. laevis</i> and <i>L. catesbeianus</i> individuals As above, these applications must be made by each associated beneficiary to the competent authority of the territory concerned. Destruction authorizations already obtained at this time can be found in Annex 9. For 2017, only the CDPNE, PNRPL, CCT and CN are concerned (PNRLG, PNRLAT and UA do not implement eradication actions this year). CN is waiting for permissions.</li> <li>3. Obtaining authorization from owners to access the ponds colonized by <i>X. laevis</i> or <i>L. catesbeianus</i> The majority of colonized ponds are private. Associated beneficiaries contacted the owners concerned to obtain their permission to implement eradication actions. For 2017, only the CDPNE, PNRPL, CCT and CN are concerned (PNRLG, PNRLAT and UA do not set eradication actions this year). CDPNE signed agreements with the owners. An example of agreement can be found in Annex 10. CN sent applications to the owners; an example is given in Annex 11. Finally, PNRPL obtained prefectural authorization to enter private property. The owners are also contacted by letter and are asked to complete a certificate. These documents are in Annex 12.</li> </ol>		
Potential problems	The various applications have been completed later than expected. All associated beneficiaries, except the PNRLG, have transmitted applications to their local authority. Some are still awaiting for the decision. PNRLG has not recruited the technician in charge of the implementation of the field actions yet. Since the application is nominative, it could not be transmitted to the competent authority yet. However, in 2017, PNRLG will not carry out eradication against <i>L. catesbeianus</i> , and therefore does not need any permit this year.		

	There will be no monitoring of indigenous Amphibians this year (see action D2), therefore authorizations for the capture of protected species are not required. PNRLG will be mainly involved in 2017 on the survey of <i>L. catesbeianus</i> on the Bassin d'Arcachon (action A2).	
Timetable	<i>Milestones</i>	<i>Expected date</i>
	Obtaining authorization for the capture of protected species of Amphibians for 2018	31/03/2018
	Obtaining authorization for the capture of protected species of Amphibians for 2019	31/03/2019
	Obtaining authorization for the capture of protected species of Amphibians for 2020	31/03/2020
	Obtaining authorization for the capture of protected species of Amphibians for 2021	31/03/2021
	Obtaining authorization for the destruction of <i>X. laevis</i> and <i>L. catesbeianus</i> individuals for 2018	31/03/2018
	Obtaining authorization for the destruction of <i>X. laevis</i> and <i>L. catesbeianus</i> individuals for 2019	31/03/2019
	Obtaining authorization for the destruction of <i>X. laevis</i> and <i>L. catesbeianus</i> individuals for 2020	31/03/2020
	Obtaining authorization for the destruction of <i>X. laevis</i> and <i>L. catesbeianus</i> individuals for 2021	31/03/2021
	Obtaining permissions from colonized pond owners for 2018	31/05/2018
	Obtaining permissions from colonized pond owners for 2019	31/05/2019
	Obtaining permissions from colonized pond owners for 2020	31/05/2020
	Obtaining permissions from colonized pond owners for 2021	31/05/2021
Objectives	The objective is to make available the administrative authorizations and the owner agreement to implement the field operations. These applications must be renewed annually. For 2017, the objective is almost achieved, despite a small, but recoverable, delay.	
Deliverables available in annex	Administrative authorizations for accidental capture of protected species of Amphibians (Annex 8) Administrative authorizations for the destruction of <i>X. laevis</i> and <i>L. catesbeianus</i> individuals (Annex 9)	

A1.3. TRAINING OF THE TEAMS RESPONSIBLE FOR IMPLEMENTING THE CONTROL MEASURES DURING THE DURATION OF THE PROJECT			Started
Duration	Foreseen start date: 01/04/2017 Actual start date: 01/04/2017	Foreseen end date: 30/06/2021 Actual (or anticipated) end date: 30/06/2021	
Progression	This sub-action contains two types of training: <ul style="list-style-type: none"> <li>- Training for native and non-native Amphibians identification: a first session 29 May 2017 in Thouars (<i>X. laevis</i>). It will be delivered by CN to the CCT, PNRLAT and UA teams. A second session is scheduled for June for the PNRPL, PNRLG and CN teams in Aquitaine (<i>L. catesbeianus</i>).</li> <li>- Training for learning the different control and eradication techniques: PNRPL and CN have participated in the training delivered by the Office National de la Chasse et de la Faune Sauvage (ONCFS). The objective was to learn how to use safely a rifle for the destruction of <i>L. catesbeianus</i>.</li> </ul>		
Potential problems	None identified		

Timetable	<i>Milestones</i>	<i>Expected date</i>
	Training for the identification of native and non-native Amphibians for CCT, PNRLAT and UA	29/05/2017
	Training for the identification of native and non-native Amphibians for PNRPL, PNRLG, CN	30/06/2017
	Training for learn the different techniques for the eradication of <i>L. catesbeianus</i> in Sologne	30/06/2017
Objectives	The objective is that all the staff involved in the setup of the control eradication, and monitoring actions is trained before field operations start. We think it can be achieved.	
Deliverables available in annex	-	

- A2. Update of the distribution or front of colonization of *X. laevis* and *L. catesbeianus*

A2. UPDATE OF THE DISTRIBUTION OR FRONT OF COLONIZATION OF <i>X. LAEVIS</i> AND <i>L. CATESBEIANUS</i>			Started
Duration	Foreseen start date: 01/04/2017 Actual start date: 01/02/2017	Foreseen end date: 30/09/2017 Actual (or anticipated) end date: 01/02/2018	
Progression	<p>This action aims at updating the distribution of <i>X. laevis</i> and <i>L. catesbeianus</i> in France. Classical (acoustic and visual identification) and molecular methods (eDNA) will be used. The eDNA technique detects species from the DNA they shed in water and request specific kits to be analysed in a lab. The SHF has published a tender on the Bulletin Officiel des Annonces de Marchés Publics and on the Official Journal of the European Union for the purchase and analysis of DNA environmental kits. SPYGEN was the only provider to reply. The contract amounts to approximately € 146,000.</p> <p>The action started in May for <i>X. laevis</i>, and will start in June for <i>L. catesbeianus</i> as reproduction occurs in June and July. UA recruited two master students to update the range of <i>X. laevis</i>. They updated the database of the species occurrences to all the data of presence of <i>X. laevis</i> before designing the sampling strategy. DNA kits have been sent in early May and the survey started at that period. For <i>L. catesbeianus</i>, action will begin in June / July. The DNA kits will be sent in May to the CDPNE (Sologne) and the PNRPL (Dordogne), then in June to CN and PNRLG (Gironde).</p>		
Potential problems	None identified		
Timetable	<i>Milestones</i>	<i>Expected date</i>	
	Realization of the inventory of <i>L. catesbeianus</i> in Sologne	31/07/2017	
	Realization of the inventory of <i>L. catesbeianus</i> in Dordogne	31/07/2017	
	Realization of the inventory of <i>L. catesbeianus</i> on the Bassin d'Arcachon	31/08/2017	
	Realization of the inventory of <i>L. catesbeianus</i> in Gironde	31/08/2017	
	Realization of the inventory of <i>X. laevis</i>	15/09/2017	
	Analysis of water samples by the ADNe technique and results	28/02/2018	
	Mapping of the presence of <i>L. catesbeianus</i> and <i>X. laevis</i>	30/03/2017	
Objectives	This action must improve knowledge on the distribution of <i>X. laevis</i> and <i>L. catesbeianus</i> in order to better target eradication activities. The inventory will be carried out according to the eradication objectives of each nucleus. The objective of this action should be achieved.		
Deliverables available in annex	-		

▪ A3. Improvement of capture techniques

A3.1. IMPROVEMENT OF CAPTURE TECHNIQUES OF LARVAE			Upcoming
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/04/2016	Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 31/12/2019	
Progression	For the first two sub-actions, a working group meeting was due at the end of 2016. However, this could not be done, and the meeting has been postponed to 2017. In addition, the SHF had planned to recruit a master student for these two sub-actions. Nevertheless, it does not have premises at present; employees work from home (telework). It has no place to host the master students and therefore did not recruit those who were to be recruited in 2016/2017. Depending on their progress on their specific tasks, students recruited under the A4 action by UA and CN may be involved in action A3.		
Potential problems	Results are expected by the end of 2019. The first year (2017) allow the survey of literature and initiate the development of new trapping systems. It is expected that the newly developed systems will be tested in 2018 and 2019 in the field. The SHF will organize a working group with the associated beneficiaries in September or October 2017 and will determine which traps can be tested.		
Timetable	Milestones		Expected date
	Organize a working group		31/10/2017
	Conduct a bibliographic synthesis		31/10/2017
Objectives	The objective of this action is to develop new trapping systems to capture larvae. The results are expected by December 2019. We believe that the objective will be achieved.		
Deliverables available in annex	-		

A3.2. IMPROVEMENT OF CAPTURE TECHNIQUES OF ADULTS			Upcoming
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/04/2016	Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 31/12/2019	
Progression	Same as the previous action		
Potential problems	Same as the previous action		
Timetable	Same as the previous action		
Objectives	The objective of this action is to develop new trapping systems to capture adults. The results are expected by December 2019. We believe that the objective will be achieved.		
Deliverables available in annex	-		

A3.3. CREATING SHELTERS WITHOUT <i>X. LAEVIS</i>			In progress
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/11/2016	Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 31/12/2019	
Progression	Concerning the third sub-action, the CCT recruited a master student who began its analysis. He must carry out a diagnosis of 4 lagoon stations in order to know their functioning and to identify how <i>X. laevis</i> can access and settle there. Please find in Annex 13 a first reflection about a lagoon station located in Cersay (St Pierre à Champ).		
Potential problems	None identified		



Timetable	<i>Milestones</i>	<i>Expected date</i>
	Diagnose 4 lagoon stations	31/09/2017
Objectives	The objective of this action is to test economically viable technical solutions to avoid the dispersal of <i>X. laevis</i> from the already colonized lagoon stations and the colonization of new stations. This objective will be achieved.	
Deliverables available in annex	-	

▪ A4. Definition of optimal control strategies for large invasive amphibian nuclei

A4.1. SURVIVAL AND DISPERSAL IN <i>X. LAEVIS</i>			In progress
Duration	Foreseen start date: 01/09/2016 Actual start date: 10/11/2016	Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 31/12/2019	
Progression	The post-doc, Giovanni Vimercati, implicated in the three sub-actions A4, has been hired in April 2017 by UA. In 2017, a master student has been hired to trap and mark <i>X. laevis</i> in two pond clusters. The sampling period was initiated in early May and was completed in early June. A second session will occur in 2018. The radio-tracking equipment of <i>L. catesbeianus</i> has been purchased.		
Potential problems	The post-doc recruitment has been delayed compared the initial schedule. The person initially selected withdrew having found another position. The second person selected was not available until April 2017.		
Timetable	Milestones		Expected date
	Analysis of 2017 data		30/09/2017
	Analysis of 2017 and 2018 data		30/09/2018
Objectives	The objective is to determine the demographic parameters of the populations (survival, recruitment), which information is needed to select and implement the control strategy.		
Deliverables available in annex	-		

A4.2. ECO-EVOLVING RESPONSES OF INVASIVE POPULATIONS AND LOCAL POPULATIONS			In progress
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/12/16	Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 31/12/2019	
Progression	The post-doc, Giovanni Vimercati, implicated in the three sub-actions A4, has been hired in April 2017 by UA. The experiment of larval development has been initiated in May 2017. A master student has been recruited by UA. Test on the response to predators of <i>X. laevis</i> are implemented.		
Potential problems	Unexpected low success of laying of adults to obtain eggs. This is expected to be solved. The post-doc recruitment has been delayed compared the initial schedule. The person initially selected withdrew having found another position. The second person selected was not available until April 2017.		
Timetable	Milestones		Expected date
	Development experiment 2017 and 2018		31/12/2019
	Response to predators 2017 and 2018		31/12/2019

<b>Objectives</b>	The objective is to determine whether <i>X. laevis</i> has already undergone evolutionary changes on the colonised range. These changes have to be identified to adjust the intensity and possibly the nature of the control strategy.
<b>Deliverables available in annex</b>	-

A4.3. MODELLING THE COST-EFFECTIVENESS OF CONTROL STRATEGIES			In progress
Duration	Foreseen start date: 01/09/2016 Actual start date: 10/11/2016	Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 31/12/2019	
Progression	Giovanni Vimercati has been hired in April 2017 by UA. Literature survey to select the most appropriate technique has been initiated. Research and selection of satellite images for <i>X. laevis</i> and <i>L. catesbeianus</i> has started. A meeting with specialists of modelling and the species is planned early July to determine the modelling approaches and the alternative control strategies to compare for both species.		
Potential problems	The post-doc recruitment has been delayed compared the initial schedule. The person initially selected withdrew having found another position. The second person selected was not available until April 2017.		
Timetable	Milestones		Expected date
	Building of connectivity models and definition of alternative strategies		30/03/2019
	Selection of the best control strategies		30/12/2019
Objectives	The objective is to build connectivity models and to test alternative strategies for both species. We will test the cost-efficiency of each strategy given the expected connectivity of the populations on the colonized ranges.		
Deliverables available in annex	-		

## C. Concrete conservation actions

- C1. Implementation of an early detection and evaluation system

C1.1. EARLY DETECTION SYSTEM			In progress
Duration	Foreseen start date: 01/09/2016	Foreseen end date: 31/08/2022	
	Actual start date: 01/09/2016	Actual (or anticipated) end date: 31/08/2022	
Progression	As part of this sub-action, the SHF must develop different tools. It already operates an online tool to share field observations available at: <a href="http://cettia.lashf.org/saisie">http://cettia.lashf.org/saisie</a> . It is planned to improve it and add a specific tag for invasive alien species of Amphibians and Reptiles. This tool is currently being developed with the web developer. Nevertheless, this tool is aimed at an informed public. As a result, it was decided to develop a second tool more appropriate for the general public that will allow the observations transmission. It will be a simplified form, such as the one developed by the LIFE DESMAN (LIFE13NAT/FR/000092). It will be available on the project website. This tool was not originally foreseen in the proposal. However, it is essential to fulfil our objectives of raising public awareness about invasive alien species. The tool developing cost is integrated in the website development and therefore does not require any additional expenditure. The SHF must also develop a smartphone application. We exchanged with structures that have already developed such applications, in particular with Ramon Gallo Berneto		

	(GESPLAN), coordinator of LIFE LAMPROPELTIS (LIFE 10 NAT/ES/000565), to benefit from their experience. There were also exchanges with the staff of the <i>Pole Système d'information, Service du Patrimoine naturel</i> of the National Natural History Museum (MnHn) who develop smartphone applications. Reflections are therefore underway.	
<b>Potential problems</b>	None identified	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	Develop a tab specific to invasive alien Amphibians and reptiles on the SHF online tool	31/07/2017
	Developing a simplified tool for the general public	31/07/2017
	Develop a smartphone application	31/12/2017
<b>Objectives</b>	The objective of the early detection system is to allow a very rapid transmission of information when <i>L. catesbeianus</i> , <i>X. laevis</i> , or another alien amphibian is detected. The three tools that we will develop increase our capacity of early detection.	
<b>Deliverables available in annex</b>	-	

C1.2. EVALUATION SYSTEM			Upcoming
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/09/2017	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022	
Progression	This sub-action has not yet begun.		
Potential problems	This sub-action was expected to start in September 2016. However, it has not yet started. This delay is due to the late recruitment of Isabelle Chauvin, financial and administrative Manager, forcing the technical coordinator to spend more time than planned on the administrative aspects of the project during the first six months.		
Timetable	Milestones		Expected date
	Establishing an evaluation committee to assess new introductions		30/09/2017
	Writing a charter or a document to be signed by each member of the evaluation committee		31/12/2017
Objectives	The aim of this sub-action is to set up an evaluation committee whose role will be to provide a rapid diagnosis of the threat posed by the introduced amphibian population and to propose actions and procedures to assess the environmental risk. This objective will be achieved.		
Deliverables available in annex	-		

- C2. Eradication of small nuclei of *L. catesbeianus*

C2.1. ERADICATION OF THE NUCLEUS OF <i>L. CATESBEIANUS</i> LOCATED IN SOLOGNE			In progress
Duration	Foreseen start date: 01/04/2017	Foreseen end date: 30/09/2021	
	Actual start date: 01/04/2017	Actual (or anticipated) end date: 30/09/2021	
Progression	This sub-action concerns only the nucleus of <i>L. catesbeianus</i> located in Sologne. The CDPNE is in charge of various operations implementation: detection of clutches, fishing of ponds to eliminate tadpoles, pond fencing to catch juveniles before dispersal, and shooting		

	<p>to eliminate adults. The CDPNE will work in partnership with the SEBB. The SEBB will make available 4 agents to the CDPNE during the field period. A loan contract for the workforce has been signed between the CDPNE, the SEBB and the agent (Annex 14). This solution was validated by EASME at the request of Frédéric Brochier (NEEMO).</p> <p>The sub-action began at the end of March. The CDPNE removed clutches from breeding ponds. Anti-dispersal fences have been installed and are checked daily or every other day to remove juveniles and adults of <i>L. catesbeianus</i> and release individuals from other native species.</p> <p>Shooting will begin later (June / July) when adults will be more active.</p>	
Potential problems	None identified	
Timetable	<i>Milestones</i>	<i>Expected date</i>
	End of the implementation of clutch detection for the field session of 2017	31/10/2017
	End of the implementation of fishing of ponds for the field session of 2017	31/10/2017
	End of checking of dispersal barriers for the field session of 2017	31/10/2017
	End of shooting to remove adults for the field session of 2017	31/10/2017
	End of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2018	31/10/2018
	End of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2019	31/10/2019
	End of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2020	31/10/2020
	End of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2021	31/10/2021
Objectives	<p>The aim of this sub-action is to complete eradication of <i>L. catesbeianus</i> in Sologne at the end of the project. The field sessions will take place every year from April to October. The implementation of the various operations in 2017 will contribute to fulfil the objective.</p>	
Deliverables available in annex	-	

C2.2. ERADICATION OF THE NUCLEUS OF <i>L. CATESBEIANUS</i> LOCATED IN DORDOGNE			Started
Duration	Foreseen start date: 01/04/2018	Foreseen end date: 30/09/2022	
	Actual start date: 01/04/2017	Actual (or anticipated) end date: 30/09/2021	
Progression	<p>In the proposal it was foreseen that the eradication actions implemented in Dordogne would start in 2018 instead of 2017 and take end in 2022 instead of 2021. The last year of the project (2022) is devoted to the evaluation of all actions, and no field action will be implemented. Therefore, it was decided to start eradication in 2017 which also ensure the continuity of the population control and benefit from actions undertaken before the project. The PNRPL will be in charge of the eradication of this nucleus. The same operations as in Sologne will be implemented.</p> <p>For 2017, the field actions have not yet begun. They will start in June / July, when individuals will be more active, and once action A2 has been implemented. Updating the distribution of <i>L. catesbeianus</i> on this nucleus is essential to better target eradication actions. Nevertheless, the PNRPL has already recruited the necessary staff and purchased the necessary equipment to carry out this action.</p>		

Potential problems	None identified	
Timetable	<i>Milestones</i>	<i>Expected date</i>
	End of the implementation of clutch detection for the field session of 2017	31/10/2017
	End of the implementation of fishing of ponds for the field session of 2017	31/10/2017
	End of prospectations of dispersal barriers for the field session of 2017	31/10/2017
	End of implementation of shooting to eliminate adults for the field session of 2017	31/10/2017
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2018	31/10/2018
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2019	31/10/2019
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2020	31/10/2020
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2021	31/10/2021
Objectives	As the previous sub-action, the aim of the sub-action C2.2 is to achieve eradication of <i>L. catesbeianus</i> in Dordogne at the end of the project. The field sessions will take place every year from April to October. The various operations implementation in 2017 will contribute to fulfil the objective.	
Deliverables available in annex	-	

C2.3. ERADICATION OF THE NUCLEUS OF <i>L. CATESBEIANUS</i> LOCATED ON THE BASSIN D'ARCACHON			Upcoming
Duration	Foreseen start date: 01/04/2018	Foreseen end date: 30/09/2021	
	Actual start date: 01/04/2018	Actual (or anticipated) end date: 30/09/2021	
Progression	The nucleus of <i>L. catesbeianus</i> located on the Bassin d'Arcachon never has benefited from eradication actions. So there is a lack of knowledge about this nucleus. The action A2 should permit to better understand the species distribution. The eradication actions will start only when Action A2 is completed. Sub-Action C2.3 will begin in 2018.		
Potential problems	None identified		
Timetable	<i>Milestones</i>		<i>Expected date</i>
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2018		31/10/2018
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2019		31/10/2019
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2020		31/10/2020
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2021		31/10/2021
Objectives	As the previous sub-actions, the aim of the sub-action C2.3 is to achieve the complete eradication of <i>L. catesbeianus</i> in the Bassin d'Arcachon at the end of the project. The field session will take place every year from 2018, from April to October. We believe that this objective will be achieved at the end of the project.		

Deliverables available in annex	-
---------------------------------	---

- C3. Protection of sites with stakes in the large nuclei of *X. laevis* and *L. catesbeianus*

C3.1. PROTECTION OF SITES WITH STAKES ON THE NUCLEUS OF <i>X. LAEVIS</i>		In progress																				
Duration	Foreseen start date: 01/04/2017 Actual start date: 01/04/2017 Foreseen end date: 30/09/2021 Actual (or anticipated) end date: 30/09/2021																					
Progression	<p>The nucleus of <i>X. laevis</i> is located on 3 departments: Deux-Sèvres, Vienne and Maine-et-Loire. The actions planned in the project will take place in Deux-Sèvres and in Maine-et-Loire. CCT is responsible for the implementation of actions in Deux-Sèvres and PNRLAT is responsible for the implementation of actions in Maine-et-Loire. Actions have been implemented for several years in Deux-Sèvres, contrary to Maine-et-Loire. There is a lack of knowledge in Maine-et-Loire, eradication actions will begin when action A2 is completed. Therefore, the sub-action C3.1 will begin in Maine-et-Loire in 2018.</p> <p>In Deux-Sèvres, CCT has started to implement this sub-action and recruited the necessary staff. Sites to protect have been identified and trapping has begun. Two sites were chosen:</p> <ul style="list-style-type: none"><li>- ponds located around the Joyette stream, to avoid dispersal to non-colonized areas,</li><li>- ponds located near the Gouraudière heap, to protect the indigenous populations of Amphibians.</li></ul> <p>Traps are placed in the ponds and retrieve on the next day to remove the adults of <i>X.laevis</i>.</p>																					
Potential problems	None identified																					
Timetable	<table><tr><th>Milestones</th><th>Expected date</th></tr><tr><td>End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2017</td><td>31/10/2017</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2018</td><td>31/10/2018</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2018</td><td>31/10/2018</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2019</td><td>31/10/2019</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2019</td><td>31/10/2019</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2020</td><td>31/10/2020</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2020</td><td>31/10/2020</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2021</td><td>31/10/2021</td></tr><tr><td>End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2021</td><td>31/10/2021</td></tr></table>		Milestones	Expected date	End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2017	31/10/2017	End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2018	31/10/2018	End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2018	31/10/2018	End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2019	31/10/2019	End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2019	31/10/2019	End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2020	31/10/2020	End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2020	31/10/2020	End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2021	31/10/2021	End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2021	31/10/2021
Milestones	Expected date																					
End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2017	31/10/2017																					
End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2018	31/10/2018																					
End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2018	31/10/2018																					
End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2019	31/10/2019																					
End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2019	31/10/2019																					
End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2020	31/10/2020																					
End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2020	31/10/2020																					
End of trapping of <i>X. laevis</i> in Deux-Sèvres in 2021	31/10/2021																					
End of trapping of <i>X. laevis</i> in Maine-et-Loire in 2021	31/10/2021																					
Objectives	The objective of this sub-action is to control <i>X. laevis</i> populations in order to protect local indigenous Amphibians populations and to avoid dispersal to non-colonized areas. The objective of this action will can be achieved.																					
Deliverables available in annex	-																					

C3.2. PROTECTION OF SITES WITH STAKES ON THE NUCLEUS OF <i>L. CATESBEIANUS</i> LOCATED IN GIRONDE		Started
Duration	Foreseen start date: 01/04/2017 Actual start date: 01/04/2017	Foreseen end date: 30/09/2018 Actual (or anticipated) end date: 30/09/2018

<b>Progression</b>	<p>CN is responsible for the implementation of eradication of <i>L. catesbeianus</i> on sites to protect in Gironde. The necessary staff has been recruited.</p> <p>It is planned that 8 sites will benefit from eradication activities.</p> <p>The selection of the 8 sites is being finalized. CN identified in the field the most interesting sites for the actions implementation. Access requests were made to the owners.</p> <p>Once the sites are chosen, the same operations as in Sologne and Dordogne will be implemented: detection and removal of clutches, pond fishing, installation of anti-dispersal barriers, shooting. A dispersion barrier has already been laid.</p>	
<b>Potential problems</b>	None identified	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	End of the implementation of clutch detections for the field campaign of 2017	31/10/2017
	End of the implementation of fishing of ponds for the field campaign of 2017	31/10/2017
	End of prospectations of dispersal barriers for the field campaign of 2017	31/10/2017
	End of implementation of shooting to eliminate adults for the field campaign of 2017	31/10/2017
	End of the implementation of the eradication actions (clutch detection, fishing of ponds, dispersal barriers, shooting) in 2018	31/10/2018
<b>Objectives</b>	<p>The objective of this sub-action is to control <i>L. catesbeianus</i> populations located in Gironde in order to protect indigenous Amphibians local populations and to avoid dispersal to non-colonized areas. The objective of this action will can be achieved.</p>	
<b>Deliverables available in annex</b>	-	

- C4. Application of control strategies in the large nuclei of *X. laevis* and *L. catesbeianus*

C4. APPLICATION OF CONTROL STRATEGIES IN THE LARGE NUCLEI OF <i>X. LAEVIS</i> AND <i>L. CATESBEIANUS</i>			Upcoming
<b>Duration</b>	Foreseen start date: 01/04/2019 Actual start date: 01/04/2019	Foreseen end date: 30/09/2021 Actual (or anticipated) end date: 30/09/2021	
<b>Progression</b>	This action will begin in 2019.		
<b>Potential problems</b>	-		
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>	
	End of the implementation of the control strategy on the nucleus of <i>X. laevis</i> in 2019	31/10/2019	
	End of the implementation of the control strategy on the nucleus of <i>L. catesbeianus</i> in 2019	31/10/2019	
	End of the implementation of the control strategy on the nucleus of <i>X. laevis</i> in 2020	31/10/2020	
	End of the implementation of the control strategy on the nucleus of <i>L. catesbeianus</i> in 2020	31/10/2020	
	End of the implementation of the control strategy on the nucleus of <i>X. laevis</i> in 2021	31/10/2021	
	End of the implementation of the control strategy on the nucleus of	31/10/2021	



	<i>L. catesbeianus</i> in 2021	
<b>Objectives</b>	The objective of this action is to apply the control strategies as defined in Action A4 when these are available on the third year of the project. This action depends on the implementation of the action A4. For the moment, there is no difficulty in implementing the action A4. We believe that the objective of the action C4 can therefore be achieved.	
<b>Deliverables available in annex</b>	-	

## D. Monitoring of the impact of the project actions

### ▪ D1. Evaluation of the impact and effectiveness of concrete conservation actions

The action D1 is divided into 4 sub-actions, each of which targets the 4 concrete conservation actions evaluation. They are detailed below. The action D1 also aims to evaluate the communication actions. For this purpose, indicators will be compiled each year. A reflection is currently under way to determine which indicators will be monitored.

D1.1. ASSESSMENT OF THE EARLY DETECTION SYSTEM		Started
<b>Duration</b>	Foreseen start date: 01/01/2017 Actual start date: 01/01/2017	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022
<b>Progression</b>	Assessment of the effectiveness of the early detection system will be achieved through indicators and reported annually by the SHF. A reflection is under way to know which indicators to use: number of data entered on the tools developed by the SHF, number of downloads of the application for smartphone, number of structures involved ... These indicators will be reported annually by the SHF, at the end of the year (November / December). For this, an Excel spreadsheet will be developed before the end of 2017.	
<b>Potential problems</b>	None identified	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	Determination of indicators	31/10/2017
	Reporting of indicators for 2017	31/12/2017
	Reporting of indicators for 2018	31/12/2018
	Reporting of indicators for 2019	31/12/2019
	Reporting of indicators for 2020	31/12/2020
	Reporting of indicators for 2021	31/12/2021
<b>Objectives</b>	The objective of this action is to evaluate the effectiveness of the early detection system developed in Action C1. It will be achieved at the end of the project.	
<b>Deliverables available in annex</b>	-	

D1.2. ASSESSMENT OF THE ERADICATION OF THE SMALL NUCLEI OF <i>L. CATESBEIANUS</i>		Upcoming
<b>Duration</b>	Foreseen start date: 01/09/2017 Actual start date: 01/09/2017	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022
<b>Progression</b>	The environmental DNA technique will be used to evaluate the effectiveness eradication of <i>L. catesbeianus</i> in Sologne, Dordogne and the Bassin d'Arcachon.	



	In Dordogne and the Bassin d'Arcachon, the survey results of action A2 will be compared to those of a second survey planned in 2021. Therefore, this sub-action has not yet begun. In Sologne, the results of action A2 will also serve as an initial state. Additional surveys will be made each year from 2018. This sub-action will therefore begin in 2018.	
Potential problems	None Identified	
Timetable	<i>Milestones</i>	<i>Expected date</i>
	Population survey in Sologne in 2018	30/09/2018
	Population survey in Sologne in 2019	30/09/2019
	Population survey in Sologne in 2020	30/09/2020
	Population survey in Sologne in 2021	30/09/2021
	Population survey in Dordogne in 2021	30/09/2021
	Population survey in the Bassin d'Arcachon in 2021	30/09/2021
Objectives	The purpose of this sub-action is to assess the success of eradication on the small population nuclei of <i>L. catesbeianus</i> . We believe that this objective can be achieved.	
Deliverables available in annex	-	

D1.3. ASSESSMENT OF THE ERADICATION OF THE LARGE NUCLEI OF <i>X. LAEVIS</i> AND <i>L. CATESBEIANUS</i>			Upcoming
Duration	Foreseen start date: 01/04/2020 Actual start date: 01/04/2020	Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2021	
Progression	As the sub-action D1.2, the environmental DNA technique will be used to evaluate the effectiveness of the control activities carried out on the nucleus of <i>L. catesbeianus</i> located in Gironde, and on the nucleus of <i>X. laevis</i> . The results of the survey carried out in action A2 will be compared to those of a second survey planned in 2020 and 2021. Therefore, this sub-action did not begin.		
Potential problems	None identified		
Timetable	Milestones		Expected date
	Survey of <i>X. laevis</i> in 2020		30/09/2020
	Survey of <i>X. laevis</i> in 2021		30/09/2021
	Survey of <i>L. catesbeianus</i> in Gironde in 2020		30/09/2020
	Survey of <i>L. catesbeianus</i> in Gironde in 2020		30/09/2021
Objectives	The purpose of this sub-action is to assess the success of control on the large nuclei of <i>X. laevis</i> and <i>L. catesbeianus</i> . We believe that this objective can be achieved.		
Deliverables available in annex	-		

D1.4. ASSESSMENT OF THE CONTROL STRATEGIES DEVELOPED ON THE ACTION A4			Upcoming
Duration	Foreseen start date: 01/04/2019 Actual start date: 01/04/2019	Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2021	
Progression	This action aims to evaluate the action C4 effectiveness. Action C4 will be implemented from 2019. Therefore, the action D1.4 is yet to be implemented.		
Potential problems	-		
Timetable	Milestone		Expected date

	Analysis of data to evaluate the effectiveness of action C4	30/06/2022
<b>Objectives</b>	The purpose of this sub-action is to assess the strategies developed in the action A4. We believe that this objective can be achieved.	
<b>Deliverables available in annex</b>	-	

▪ *D2. Assessment of restoration of ecosystem functions*

D2. Assessment of restoration of ecosystem functions		In progress
<b>Duration</b>	Foreseen start date: 01/01/2017 Actual start date: 01/01/2017	Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2021
<b>Progression</b>	<p>To assess the ecosystem functions restoration, the two faunistic groups survey is implemented:</p> <ul style="list-style-type: none"> <li>- monitoring of indigenous amphibian populations,</li> <li>- monitoring of local populations of aquatic invertebrates</li> </ul> <p>A first survey carried out at the beginning of the project will provide an initial state, a second monitoring carried out at the end of the project will allow to assess the effects of actions on the ecosystem functions restoration.</p> <p>This action is implemented on several sites on all the nuclei of <i>X. laevis</i> and <i>L. catesbeianus</i>. It was foreseen in the proposal that the first monitoring would be put in place in 2017 for all nuclei and then the second in 2021. However, the lack of knowledge about the distribution of <i>L. catesbeianus</i> in the Bassin d'Arcachon and Gironde does not allow to identify survey sites now follow. For these two nuclei, the monitoring will begin in 2018. For the other nuclei (Sologne, Dordogne, Deux-Sèvres/Maine-et-Loire), the action began. For the monitoring of indigenous amphibian populations, a first visit was made at the end of March / beginning of April. Two more passages are planned for May / June and July.</p> <p>In the proposal, it was expected that at least 36 sites would be monitored for the assessment of the ecosystems colonized by <i>L. catesbeianus</i> and 30 sites for ecosystems colonized by <i>X. laevis</i>. However, the number of sites monitored is finally more important. Indeed, the protocol developed in action A1.1 for the monitoring of Amphibians recommends to monitor several areas per nucleus. Each area consists of three to seven sites each. Thus, about 30 sites will be monitored on the <i>L. catesbeianus</i> nucleus in Sologne, divided into six areas. At least 35 sites will be monitored on the <i>L. catesbeianus</i> nucleus in Dordogne, divided into 6 areas. 30 sites will be monitored on the <i>X. laevis</i> nucleus, divided into 8 areas. The number of sites monitored will be defined in 2018 for the nuclei of <i>L. catesbeianus</i> in Gironde and the Bassin d'Arcachon.</p> <p>For aquatic invertebrates, two passages are planned: the first in July, the second in September.</p>	
<b>Potential problems</b>	The main difficulty has been to identify the sites to follow in the nuclei of <i>L. catesbeianus</i> located on the Bassin d'Arcachon and in the Gironde. It was decided to postpone the first follow-up to 2018. This change makes it possible to implement a more robust design and thus to achieve the action objectives.	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	First survey of indigenous Amphibians and invertebrates in Sologne	30/09/2017
	First survey of indigenous Amphibians and invertebrates in Dordogne	30/09/2017
	First survey of indigenous Amphibians and invertebrates in Deux-Sèvres/Maine-et-Loire	30/09/2017
	First survey of indigenous Amphibians and invertebrates in Gironde	30/09/2018

	First survey of indigenous Amphibians and invertebrates on the Bassin d'Arcachon	30/09/2018
	Second survey of indigenous Amphibians and invertebrates in Sologne	30/09/2021
	Second survey of indigenous Amphibians and invertebrates in Dordogne	30/09/2021
	Second survey of indigenous Amphibians and invertebrates in Deux-Sèvres/Maine-et-Loire	30/09/2021
	Second survey of indigenous Amphibians and invertebrates in Gironde	30/09/2021
	Second survey of indigenous Amphibians and invertebrates on the Bassin d'Arcachon	30/09/2021
<b>Objectives</b>	The purpose of this sub-action is to assess restoration of functions of ecosystems. We believe that this objective can be achieved.	
<b>Deliverables available in annex</b>	-	

▪ *D3. Assessment of the socio-economic impact of the project*

D3. ASSESSMENT OF THE SOCIO-ECONOMIC IMPACT OF THE PROJECT			Started
<b>Duration</b>	Foreseen start date: 01/01/2017 Actual start date: 01/05/2017	Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2021	
<b>Progression</b>	The assessment of the socio-economic impact of the project will be achieved through indicators. A reflection is under way to know which indicators to use. These indicators will be reported annually by the SHF, at the end of the year (November / December). For this, an Excel spreadsheet will be developed before the end of 2017.		
<b>Potential problems</b>	This sub-action was expected to start in January 2017. However, it has not yet started. This delay is due to the late recruitment of Isabelle Chauvin, financial and administrative Manager, forcing the technical coordinator to spend more time than planned on the administrative aspects of the project during the first six months.		
<b>Timetable</b>	<i>Milestones</i>		<i>Expected date</i>
	Determination of indicators		31/10/2017
	Reporting of indicators for 2017		31/12/2017
	Reporting of indicators for 2018		31/12/2018
	Reporting of indicators for 2019		31/12/2019
	Reporting of indicators for 2020		31/12/2020
	Reporting of indicators for 2021		31/12/2021
<b>Objectives</b>	The purpose of this sub-action is to assess the socio-economic impact of the project. We believe that this objective can be achieved.		
<b>Deliverables available in annex</b>	-		

▪ *D4. Assessment of the LIFE indicators*

D4. ASSESSMENT OF THE LIFE INDICATORS			Upcoming
<b>Duration</b>	Foreseen start date: 01/01/2017 Actual start date: 01/01/2017	Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2021	

<b>Progression</b>	The SHF is in charge of this action. It must inform the qualitative and quantitative outcome indicators for LIFE projects via the Internet platform developed by the EC, in 2017 (initial state), in 2021 and 5 years after the end of the project. For 2017, it has not yet done so. Some indicators will only be available when certain follow-up actions have been implemented. For example, the indicator "Invasive alien species (IAS) or other threats" should allow to monitor the surface colonized by <i>X. laevis</i> and <i>L. catesbeianus</i> . Action A2 must make it possible to know the initial state of the situation. The results will be available in early 2018. The Excel table of LIFE indicators will therefore be provided in the next progress report.	
<b>Potential problems</b>	Time has been planned on this action (3 days for 2017 and 3 days 2021) but SHF may need more time to get familiar with this tool.	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	Monitoring of the indicators for LIFE projects (initial state)	31/12/2017
	Updating of the indicators for LIFE projects	31/08/2022
	Updating of the indicators for LIFE projects	31/18/2027
<b>Objectives</b>	The purpose of this sub-action is to assess the qualitative and quantitative outcome indicators for LIFE projects. We believe that this objective can be achieved.	
<b>Deliverables available in annex</b>	-	

## E. Public awareness and dissemination of results

### ▪ E1. Planning and implementation of communication

E1.1. COMMUNICATION PLAN AND COMMUNICATION AND AWARENESS-RAISING TOOLS		In progress
<b>Duration</b>	Foreseen start date: 01/09/2016 Actual start date: 01/09/2016	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022
<b>Progression</b>	<p>The SHF is in charge of the development of the communication plan and the various communication media.</p> <p>It was planned that the SHF recruits a master student to elaborate the communication plan. Nevertheless, it does not have premises at present; employees work from home (telework). It has no place to host the master students and therefore did not recruit those who were to be recruited in 2016/2017. It was therefore decided to draw up this plan internally (under development).</p> <p>For the development of the visual identity and the website, the SHF called upon an external service provider. An announcement has also been posted on the SHF website. The visual identity has been finalized in April (Annex 15). The website is under development. A simplified version is already online (<a href="http://life-croaa.eu">http://life-croaa.eu</a>); it will be completed during the months of June and July.</p> <p>Other communication tools have not yet been elaborated. Indeed, the graphic charter and the logo are necessary for the elaboration of these different tools. It is planned that the brochure of the project, poster, information panels will be developed during summer 2017. The others tools are planned for later. Concerning the information panels, a reflection has been carried out with the associated beneficiaries. It was decided that the format would be the same for all the nuclei but the content would be adapted to each context.</p> <p>Information about the LIFE CROAA is also disseminated via the SHF Facebook site and for SHF members, via the <i>Dépêche herpétologique</i>, a pdf newsletter.</p> <p>Finally, some articles about the program were published in the local press (Annex 16).</p>	

<b>Potential problems</b>	Delays have been identified in the development of the communication plan and various awareness-raising tools. This is due to the fact that the technical coordinator has been in charge of the administrative and financial aspects for several months prior the recruitment of the administrative and financial coordinator. Also we want to clearly identify the multiple structures that we want to sensitize in order to adapt our communication and be more relevant. However, this delay should be caught up. The tools should be available before the end of 2017.	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	Development of the communication plan	31/08/2017
	Development of the brochure	31/08/2017
	Development of the poster	31/08/2017
	Development of the exhibition	31/12/2017
	Development and installation of the information panels	31/08/2017
	Development of newsletter n°1	31/07/2017
	Development of the Layman's report	15/06/2022
<b>Objectives</b>	This action should allow the development of various awareness-raising tools. Despite the delay, this objective can be achieved.	
<b>Deliverables available in annex</b>	Graphical charter (Annex 15)	

E1.2. NETWORKING WITH OTHER EUROPEAN PROJECTS			In progress
Duration	Foreseen start date: 01/09/2016 Actual start date: 01/09/2016		Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022
Progression	The SHF contacted two LIFE project dealing with invasive alien species (LIFE LAMPROPELTIS - LIFE10 NAT/ES/000565 and LIFE ASAP - LIFE15 GIE/IT/001039). Discussions with LIFE LAMPROPELTIS focused on the smartphone application development as part of an early detection system. Exchanges with LIFE ASAP focused on awareness-raising activities for the general public. On the other hand, the SHF attended to the interLIFE French meetings organized by LIFE DESMAN (LIFE13NAT / FR / 000092) in November 2016. It is also planned that SHF will attend in 2017 to the interLIFE meeting in La Réunion organized by LIFE Forêts sèches (LIFE13 BIO/FR/000259) and LIFE Petrels (LIFE13 BIO/FR/000075).		
Potential problems	None identified		
Timetable	Milestones		Expected date
	Participation to the French interLIFE meeting 2017		07/12/2017
	Networking with others LIFE projects		31/08/2022
Objectives	The objective of this sub-action (networking with other projects) can be achieved.		
Deliverables available in annex	-		

- E2. Awareness of the issue of invasive alien Amphibians and dissemination of project results

E2.1. PREVENTION OF INTENTIONAL OR UNINTENTIONAL INTRODUCTION OF EXOTIC AMPHIBIANS			In progress
<b>Duration</b>	Foreseen start date: 01/09/2016 Actual start date: 01/09/2016	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022	

<b>Progression</b>	<p>This sub-action targets several types of audience: the general public, young people, terrariophiles, breeding facilities (in particular for <i>X. laevis</i>), pet shops, managers of natural and scientific areas.</p> <p>It is expected that the SHF will participate in local events to meet the general public. In 2016, a stand was held at the <i>Festival International du Film Ornithologique de Ménigoute</i>, located in Deux-Sèvres, near the area colonized by <i>X. laevis</i>. An alert poster about <i>X. laevis</i> has been presented (Annex 17). In addition, a LIFE CROAA poster (Annex 18) has been presented at the national congress of herpetology organized by the SHF in October 2017. A volunteer participated in the World Wetlands Day in Angers at the beginning of February 2017. This has permitted to raise awareness of another type of public.</p> <p>PNRPL participated in the technical days on invasive alien species organized by the COTITA (technical public).</p> <p>Moreover, we are working to identify networks and create a list of structures we want to raise awareness of alien invasive Amphibians issue.</p> <p>The SHF will develop in 2017 different communication media adapted to each audience.</p>	
<b>Potential problems</b>	None identified	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	Development of a flyer and a poster for public awareness	31/08/2017
	Development of an information brochure for pet shops and breeding centres	31/12/2017
	Development of an information brochure for terrariophiles	31/12/2017
	Development of a teaching kit	28/02/2018
<b>Objectives</b>	The objective of this action is to avoid the introduction into the natural environment of alien Amphibians. To reach this objective, all the concerned audiences are targeted. This objective will be achieved.	
<b>Deliverables available in annex</b>	<p>Alert poster about <i>X. laevis</i> (Annex 17)</p> <p>LIFE CROAA poster (Annex 18)</p>	

E2.2. FACILITATING OF THE IMPLEMENTATION OF ACTIONS TO CONTROL INVASIVE ALIEN AMPHIBIANS			Upcoming
<b>Duration</b>	Foreseen start date: 01/09/2017 Actual start date: 01/09/2017	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022	
<b>Progression</b>	This sub-action has not yet begun. The SHF has planned to send letters to the various territorial authorities concerned by the presence of <i>X. laevis</i> or <i>L. catesbeianus</i> to sensitize local decision-makers on the invasive alien Amphibians issue and the need to act to preserve local biodiversity.		
<b>Potential problems</b>	None identified		
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>	
	Sending letters to local authorities	31/03/2018	
<b>Objectives</b>	The objective of this sub-action is to sensitize local authorities to facilitate the eradication activities implementation. This objective will be achieved.		
<b>Deliverables available in annex</b>	-		

E2.3. PROPOSAL TO IMPROVE PUBLIC POLICY AND REGULATORY REQUIREMENTS ABOUT INVASIVE ALIEN SPECIES			In progress
<b>Duration</b>	Foreseen start date: 01/09/2016 Actual start date: 01/09/2016	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022	
<b>Progression</b>	<p>It is planned that SHF participate in various workshops or meetings, in particular with the French Ministry of the Environment, the French committee of the IUCN or the GT-IBMA (Groupe de Travail sur les Invasions Biologiques en Milieu Aquatique). In September 2016, the SHF and the UA have been invited by the Ministry to participate in the working seminar about the National Strategy on Invasive Alien Species, drafted at the initiative of the Ministry by a group of structures (MnHn, IUCN, ONCFS, FCBN, etc.). The SHF was asked to present the LIFE CROAA and the actors dynamic around this project. In December 2016, the SHF has also participated in the annual meeting of the GT-IBMA and will participate in the next meeting in May.</p> <p>The French Ministry of the Environment should also ask at the SHF to carry out a risk analysis on <i>X. laevis</i> to reassess its place on the European list of invasive alien species of concern. This work is planned for early 2018. At present, only <i>L. catesbeianus</i> is registered on this list.</p>		
<b>Potential problems</b>	None identified		
<b>Timetable</b>	<i>Milestones</i>		<i>Expected date</i>
	Participation in 2018 in meetings or seminars organized by the Ministry of the Environment, IUCN or GT-IBMA		31/12/2018
	Writing a risk analysis on <i>X. laevis</i>		31/12/2018
	Participation in 2019 in meetings or seminars organized by the Ministry of the Environment, IUCN or GT-IBMA		31/12/2019
	Participation in 2020 in meetings or seminars organized by the Ministry of the Environment, IUCN or GT-IBMA		31/12/2020
	Participation in 2021 in meetings or seminars organized by the Ministry of the Environment, IUCN or GT-IBMA		31/12/2021
	Participation in 2022 in meetings or seminars organized by the Ministry of the Environment, IUCN or GT-IBMA		31/12/2022
<b>Objectives</b>	It is not easy to change the regulations on invasive alien species. However, the opportunity to write a risk analysis to change the status of <i>X. laevis</i> at the European scale would enable us to achieve our objective.		
<b>Deliverables available in annex</b>	-		

E2.4. REPLICABILITY AND TRANSFERABILITY OF METHODS AND TECHNIQUES DEVELOPED			Upcoming
<b>Duration</b>	Foreseen start date: 01/01/2018 Actual start date: 01/01/2018	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022	
<b>Progression</b>	The project has just started and the field activities have not yet begun. It is therefore difficult to transfer our methods at this time. It is planned to contact other structures working on the control of <i>X. laevis</i> and <i>L. catesbeianus</i> . Meetings in the field are planned. This action has therefore not begun.		
<b>Potential problems</b>	None identified		
<b>Timetable</b>	<i>Milestones</i>		<i>Expected date</i>



	Networking with other structures which working about <i>X. laevis</i> and <i>L. catesbeianus</i>	31/12/2021
<b>Objectives</b>	The aim of this action is to experiment the techniques developed during the project in other areas colonized by <i>X. laevis</i> and <i>L. catesbeianus</i> , and eventually by other alien Amphibians. We believe that the objective of this sub-action can be achieved.	
<b>Deliverables available in annex</b>	-	

E2.5. DISSEMINATION OF PROJECT RESULTS AND SHARING OF EXPERIENCES AND KNOWLEDGE GAINED DURING THE PROJECT		Upcoming
<b>Duration</b>	Foreseen start date: 01/01/2019 Actual start date: 01/01/2019	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022
<b>Progression</b>	As the project has just begun, this sub-action will be implemented a little later.	
<b>Potential problems</b>	None identified	
<b>Timetable</b>	<i>Milestones</i>	<i>Expected date</i>
	Organization of a scientific congress on the control of invasive alien Amphibians	31/10/2019
	Drafting of a management guide for invasive alien Amphibians	30/06/2022
<b>Objectives</b>	The aim of this action is to disseminate the project results on a wide scale to all the audiences concerned. We believe that the objective of this sub-action can be achieved.	
<b>Deliverables available in annex</b>	-	

## F. Project management

- F1. General coordination of the project and animation of the committees

F1. GENERAL COORDINATION OF THE PROJECT AND ANIMATION OF THE COMMITTEES		In progress
<b>Duration</b>	Foreseen start date: 01/09/2016 Actual start date: 01/09/2016	Foreseen end date: 31/08/2022 Actual (or anticipated) end date: 31/08/2022
<b>Progression</b>	<p>Concerning the general coordination of the project, several actions have already been set:</p> <ul style="list-style-type: none"> <li>- The administrative and financial coordinator, Isabelle Chauvin, was recruited by the SHF with a few months' delay (January 2017 instead of September 2016).</li> <li>- The partnership agreements between the SHF and each of the associated beneficiaries were drafted and signed at the end of 2016. They are available in Annex 19. The first advance of the European Commission contribution was distributed to the associated beneficiaries.</li> <li>- Various tools have been developed to ensure technical, administrative and financial coordination of the project.</li> </ul> <p>From an administrative and financial point of view, an expenditure monitoring tool was sent to the associated beneficiaries. It is based on the Excel file "Financial Statement of the individual beneficiary" available on the website of the European Commission. Each associated beneficiary is asked to report his expenses to the SHF every three months and to send all the administrative and financial supporting documents. The SHF has also sent to the associated beneficiaries the timesheets to be filled out monthly and returned at the beginning of the following</p>	



	<p>month. This has enabled associated beneficiaries to integrate reporting requirements into their working methods.</p> <p>From a technical point of view, the 2017 actions calendar was provided to the associated beneficiaries, as well as a dashboard showing the outputs to be achieved and the progress of each action.</p> <ul style="list-style-type: none"> <li>- The applications for project co-funding has been made and sent to the co-funders already committed to the project. Other co-funders have been sought.</li> <li>- Two project monitoring committees have been organized: the first on 13<sup>th</sup> October 2016 and the second on 11<sup>th</sup> April 2017. The reports are in Annexes 1 and 2.</li> <li>- The first visit of Frédéric Brochier, NEEMO monitor, took place on 11<sup>th</sup> and 12<sup>th</sup> April 2017. The visit consisted of a technical visit and an administrative and financial visit. The reports are in Annex 3 and 4.</li> </ul> <p>A steering committee and a scientific committee must be organized before the end of the year.</p>										
<b>Potential problems</b>	The administrative and financial monitoring implementation of the project according to the requirements of the European Commission has required the adaptation of the working methods of the beneficiaries. The beneficiaries have different statuses (public or private) and operate very differently. Some may find it difficult to collect the necessary supporting documents. The monitoring implementation took a long time.										
<b>Timetable</b>	<table> <tr> <th><i>Milestones</i></th><th><i>Expected date</i></th></tr> <tr> <td>Progress report</td><td>30/09/2018</td></tr> <tr> <td>Midterm report</td><td>30/11/2019</td></tr> <tr> <td>Progress report</td><td>30/05/2021</td></tr> <tr> <td>Final report</td><td>30/11/2022</td></tr> </table>	<i>Milestones</i>	<i>Expected date</i>	Progress report	30/09/2018	Midterm report	30/11/2019	Progress report	30/05/2021	Final report	30/11/2022
<i>Milestones</i>	<i>Expected date</i>										
Progress report	30/09/2018										
Midterm report	30/11/2019										
Progress report	30/05/2021										
Final report	30/11/2022										
<b>Objectives</b>	The objective of this action is to ensure the proper coordination of the project. This objective can be achieved.										
<b>Deliverables available in annex</b>	Partnership agreements (Annex 19)										

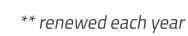
▪ *F2. External audit*

F2. EXTERNAL AUDIT			Upcoming
Duration	Foreseen start date: 01/01/2022 Actual start date: 01/01/2022	Foreseen end date: 30/06/2022 Actual (or anticipated) end date: 30/06/2022	
Progression	This action is planned for 2022.		
Potential problems	-		
Timetable	Milestones	Expected date	
	Implementation of the audit by an external auditor	30/06/2022	
Objectives	-		
Deliverables available in annex	-		

▪ F3. Conservation and communication plan after LIFE

F3. CONSERVATION AND COMMUNICATION PLAN AFTER LIFE			Upcoming
Duration	Foreseen start date: 01/04/2022	Foreseen end date: 31/31/08/2022	
	Actual start date: 01/04/2022	Actual (or anticipated) end date: 31/08/2022	
Progression	This action is planned for 2022.		
Potential problems	-		
Timetable	Milestones		Expected date
	Drafting of the conservation and communication plan after LIFE		31/08/2022
Objectives	-		
Deliverables available in annex	-		

The Gantt chart below shows the progress of actions over the total duration project. A more precise diagram can be found in Annex 20, which specifies the tasks to be accomplished by action and sub-action for the year 2017.



5



## 6.2. Envisaged progress until next report

The next progress report is scheduled for September 2018. Several tasks will have to be completed by then:

- Action A2: The inventory of *X. laevis* and *L. catesbeianus* will be completed. The DNA analysis results are expected by February 2018.
- Action A3: Capture techniques improvement for the two species will have been developed. They will be tested directly in the field in 2018; A second experiment session will be held on the following year.
- Action A4: The demographic and eco-evolutionary collection data for of control strategies modelling will come to an end. Modelling will begin in 2019.
- Action C1: The early detection system will be operational. The three planned tools will be developed (smartphone application, simplified tool for the general public available on the project website, online SHF tool for a more informed public).
- Actions C2 and C3: The first two field campaigns will be completed.

The Gantt chart above shows the forecast progress of all actions.

## 6.3. Impact

### ▪ Nature & Biodiversity

At this time, the eradication and control measures for the invasive populations of *X. laevis* and *L. catesbeianus* have just begun. Therefore, it is not possible to assess the impact of the project on local indigenous amphibian and invertebrate populations.

On the other hand, some communication and information actions of the general public took place and permitted it to raise awareness of the risks of introductions of exotic species in the natural environment. These education actions are as important as field actions to protect the native species.

### ▪ Indirect impacts

A local association for the protection of nature, the Conservatoire d'Espaces Naturels (CEN) of the Pays de la Loire, one of the French regions concerned by the presence of *X. laevis*, wished to use its expertise and additional resources under the project LIFE CROAA in order to control this species. CEN coordinates an experts and managers network working on Invasive Alien Species. It wishes to alert its partners to the issue of *X. laevis* and to intervene if needed in line with the objectives of the LIFE CROAA project.

### ▪ Table of indicators

The current progress of the project does not permit to evaluate the project-specific indicators performance and to compare the results with the objectives indicated in the proposal at this time. Indeed, some actions, such as action A2, are necessary to inform these indicators (see above Action D4 progress).

### ▪ Policy implication

The action E2.3 aims to contribute to improving public policies and regulations on Invasive Alien Species. In this context, the SHF participated in a seminar organized by the Ministry of the Environment on the French



national strategy on Invasive Alien Species. It participated in the exchanges and the LIFE CROAA project has been presented. A public consultation was opened. Some of the associated beneficiaries (PNRPL, CCT) provided their comments. The national strategy was published on 30<sup>th</sup> March 2017.

The SHF was also requested by the French committee of the IUCN to draft a risk analysis for the inclusion of *X. laevis* among invasive alien species of concern at European level (Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22<sup>nd</sup> October 2014 on the prevention and management of the introduction and spread of invasive alien species). This work is planned for 2018, the SHF will receive a formal request from the Ministry of the Environment.

## 6.4. Outside LIFE

Natasha Kruger has been hired in February 2017 as a PhD student in a cotutelle between the University of Stellenbosch in South Africa and the University of Lyon 1 in France. She is supervised by Jean Secondi (UA) and John Measey (Stellenbosch). Jean Secondi is also affiliated to Lyon 1 for his research activity. The PhD is funded by a bursary of the Embassy of Ministry of Foreign Affairs in South Africa, and a bursary of the Centre of Excellence for Invasive Biology at the University of Stellenbosch. No European funds are involved. Natasha Kruger will compare the development and characteristics of the larval stage of *X. laevis* in its colonized range in France and in the native range (not planned in the LIFE project). The objective is to determine whether changes occurred during the invasion process that could enhance or reduce invasiveness. The action is complementary to the action of the LIFE program. The PhD student assists in the realization of A.4.2, and brings knowledge and experience from the South African partner on this species. It is not her main topic though which will investigate the effect of temperature on development and anti-predator responses from *X. laevis* tadpoles to predators (response of native species to *X. laevis* are planned in the project). Results of her thesis will contribute to a better understanding of invasion in *X. laevis*. These may be used later to refine control actions not yet planned or envisioned by the LIFE project.

# 7. FINANCIAL PART

## 7.1. Financial management of the project

The project has 8 associated beneficiaries, private non-commercial structures and public bodies. Each one has its own internal functioning. It is important to clarify the individual situation of each with regard to four important points.

In addition to the information below, you will find in Annex 21 information for each beneficiary.

- *Reliable accounting*

In order to establish a reliable accounting and reporting system, each beneficiary defined project codes in its analytical accounting system.



Concerning the payment proofs to be provided for justified expenditure, French public bodies cannot provide bank statements, accounting being managed by a General Treasury. We therefore asked the beneficiaries concerned to provide a summary of the expenses with certified conformity signed by the Principal Treasurer.

- *Time Registration System*

Concerning that point, we decided that each employee fulfill the timesheets available on the LIFE website (toolbox), even those who work 100% on the project.

In parallel, for beneficiaries who did not have a time registration system in place at the time that the grant agreement is signed, the Société Herpétologique de France provided them with an electronic tool with Excel program.

We asked them to use this daily registration basis that establish total working time of each person, with a monthly validation of the manager.

- *Procurement rules*

All beneficiaries are in principle free to organize the procurement in their usual way as long as they respect the criteria on 'best value for money or lowest price' and 'absence of conflict of interest'.

On the other hand, there is an obligation to use an open tender procedure when the value of a contract exceeds 130 000 €.

All beneficiaries keep in their project file a description of the tender rules (including their internal guidelines for selecting contractors if any) and the regulatory references used within the project.

Furthermore, some of the beneficiaries are also subject to the Public Procurement Code.

- *Value added tax (V.A.T.)*

The VAT is ineligible unless it is actually borne by the beneficiaries.

For the next progress report, we will supply certificates issued by the tax authorities for each beneficiary.

## 7.2. Costs incurred

- *Per category of expenditure*

Please find below the table concerning the incurred project costs.



TABLE 1. COSTS INCURRED PER CATEGORY OF EXPENDITURE

Budget breakdown categories	Budgeted costs in €*	Costs incurred from the start date to 30/04/2017 in €	% of Budget**
1. Personnel	2 213 626 €	127 472.28 €	5.76 %
2. Travel and subsistence	270 778 €	10 201.16 €	3.77 %
3. External assistance	469 895 €	6 147.40 €	1.31 %
4. Durable goods			
Infrastructure			
Equipment	97 681 €	22 750.62 €	23.29 %
Prototype			
5. Land purchase / long-term lease			
6. Consumables	63 248 €	15 538.66 €	24.57 %
7. Other Costs	90 550 €	3 013.98 €	3.33 %
8. Overheads	224 401 €	12 958.69 €	5.77 %
TOTAL	3 430 179 €	198 082.79 €	5.77 %



▪ *Per action*

Please find below an additional table concerning the incurred project costs per action. In agreement with our NEEMO monitor, we added 2 columns in this table: costs incurred from the start date to 30/04/17 in € and realized hours from the start date to 30/04/17.

TABLE 2. COSTS INCURRED PER ACTION

Action number and name*	Budgeted costs in €	Costs incurred from the start date to 30/04/2017 in €	% of Budget spent
Action A1	116 800 €	24 335.82 €	20,84%
Action A2	214 996 € (✕)	6 072.00 €	2,82%
Action A3	90 325 €	3 314.79 €	3,67%
Action A4	241 316 € (✕)	26 068.43 €	10,80%
Action C1	77 812 €	3 582.58 €	4,60%
Action C2	780 729 € (✕)	1 416.98 €	0,18%
Action C3	256 122 € (✕)	32 412.01 €	12,65%
Action C4	207 534 € (✕)	50.96 €	0,02%
Action D1	104 394 €	490.25 €	0,47%
Action D2	59 610 €	6 854.80 €	11,50%
Action D3	5 088 €	12.40 €	0,24%
Action D4	1 086 €		
Action E1	191 963 €	13 005.24 €	6,77%
Action E2	267 535 €	10 995.85 €	4,11%
Action F1	571 874 €	56 512.00 €	9,88%
Action F2	17 594 €		
Action F3	1 000 €		
Overheads	224 401 €	12 958.68 €	
TOTAL	3 430 179 €	198 082,79 €	5,77%

Budgeted hours	Realised hours from the start date to 30/04/2017	% of hours spent
3 556	1 030,30	28,97%
4 186	171,30	4,09%
4 102	249,90	6,09%
10 976	234,70	2,14%
2 401	135,75	5,65%
22 988	41,50	0,18%
8 358	537,80	6,43%
7 462	2,00	0,03%
938	17,75	1,89%
3 710	293,30	7,91%
196	0,50	0,26%
42		
4 130	299,40	7,25%
7 980	439,50	5,51%
17 717	1 980,50	11,18%
98		
0		
98 840	5 434,20	5,50%

\* Detailed name below

(✕) Budget rectification below



**Name of actions:****A Preparatory actions, elaboration of management plans and/or of actions plans**

- A1. Preparation for field actions
- A2. Update of distribution and / or colonization front of *X. laevis* and *L. catesbeianus*
- A3. Improved capture techniques
- A4. Definition of optimal control strategies for large population nuclei of invasive Amphibians

**C – Concrete conservation actions**

- C1. Implementation of an early detection and evaluation system
- C2. Eradication of small population nuclei of Frog frog
- C3. Protection of sites with stakes in the large population nuclei of *X. laevis* and *L. catesbeianus*
- C4. Application of control strategies in the large population nuclei of *X. laevis* and *L. catesbeianus*

**D – Monitoring of the impact of the project actions**

- D1. Evaluation of the impact and effectiveness of concrete conservation actions
- D2. Evaluation of restoration of ecosystem functions
- D3. Evaluation of the socio-economic impact of the project
- D4. Evaluation of indicators for LIFE projects

**E – Public awareness and dissemination of results**

- E1. Communication Planning and Implementation
- E2. Awareness of the problem of invasive alien Amphibians and dissemination of project results

**F – Project management**

- F1. Overall coordination of the project and facilitation of the committees
- F2. External audit of the project
- F3. Implementation of a post-LIFE conservation and communication plan



## 7.3. Budget rectification

The figures highlighted in yellow in the last column have been corrected in this report. In fact, in the form R2 of the proposal, several expenses have been imputed to the action A2 by error. Action A2 lasts only one year while some of the expenses will serve for actions A4, C2, C3 and C4 the following years.

Note that the global budget of the project does not change, but it edits the budget of 5 actions.

Please find below the detail of those rectifications:

TABLE 3. BUDGET RECTIFICATION

Action number	Budgeted costs in € (form R2 of the proposal)	Rectification	Definitive budgeted costs in €
Action A2	224 708 €	External assistance: - 6000 € (car rental) External assistance: + 280 € (rendering) Consumables : - 3 992 € (field equipment)	214 996 €
Action A4	235 116 €	External assistance: + 6000 € (car rental) Consumables : + 200 € (field equipment)	241 316 €
Action C2	777 289 €	External assistance: - 280 € (rendering) Consumables : + 3 720 € (field equipment)	780 729 €
Action C3	256 332 €	Consumables : - 210 € (garbage bags and ammunition)	256 122 €
Action C4	207 252 €	Consumables: + 72 € (field equipment) Consumables : + 210 € (garbage bags and ammunition)	207 534 €
TOTAL	1 700 697 €		1 700 697 €