

INVASIVE UNGULATES CONTROL OPERATIONS



New Caledonia

French Polynesia

Wallis and Futuna

Pitcairn Islands

 **BUDGET:** €1,093,000 (XPF 130.5 million)
including €575,000 contributed by the PROTEGE fund


 **ACTION TIME PERIOD:** May 2019 – May 2024

 **PARTNERS:**



• Customary authorities
• Tribal associations

BRIEF SUMMARY

 **Operations to control Rusa deer and wild pig populations have been carried out in New Caledonia to limit the damage caused by these invasive alien species (IAS) to ecosystems, crops and water resources.**

The main aim of these actions was to protect the rainforests of the Central Mountain Range, whose environments are remarkable for their exceptional biodiversity and their crucial role in maintaining essential ecosystem services, particularly those linked to the water cycle.

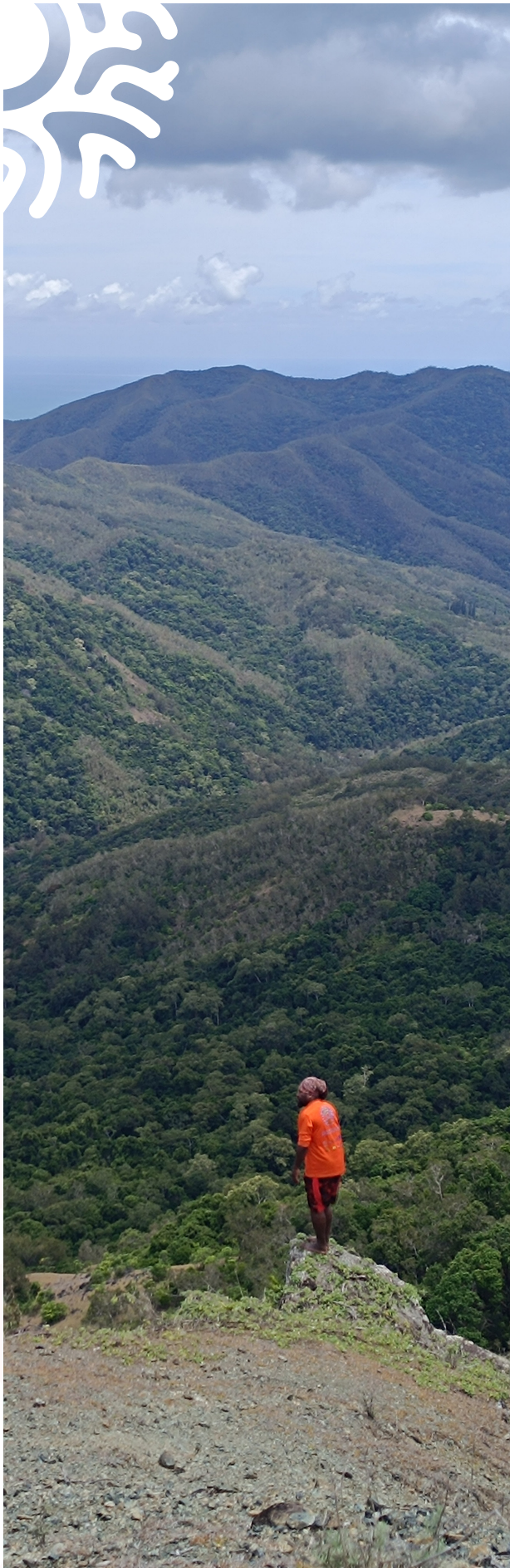
At the same time, the involvement of tribes in participatory control hunting and trapping approaches aimed at reducing the damage to the savannah areas surrounding the forest massifs and to cultivated fields to facilitate the project's acceptance by local communities and contribute to the overall control effort.

Thanks to the training developed and delivered as part of the project, local communities' skills in safety, armed control hunting and participatory trapping have been considerably strengthened and put into practice, both on Grande Terre and on the Loyalty Islands of Lifou and Maré. In addition, the training of the territory's first professional control agents marked an important milestone, enabling unprecedented


control operations to be implemented in the Central Mountain Range's particularly remote and difficult-to-access priority rainforest areas, which had not previously benefited from any targeted control action.

Made possible by in-depth consultation, the control operations have been well received by the local communities, who have expressed their wish to see them continue for the benefit of the forests and water resources. A localised action should also be extended in one of the priority areas as part of the PEBACC+ project.

However, the challenge posed by invasive ungulates has compounded by the major crisis affecting New Caledonia since May 2024. While ungulate populations had been growing out of control for a long time in these priority rainforests, the continuation of recently initiated control actions is now jeopardised by severe restrictions on local funding.



BACKGROUND

 In New Caledonia, the Rusa deer and wild pigs are two priority invasive alien species (IAS) that seriously impact rainforests, their unique biodiversity and the essential ecosystem services they provide. In addition, the damage they inflict on agricultural production poses significant challenges to local food security.

The Rusa deer population is estimated at between 250,000 and 370,000 on Grande Terre, which represents the world's largest concentration of the species. **In dense, high altitude rainforests, which are difficult to access and where food hunting is virtually non-existent, invasive populations are out of control.** The negative impacts are major for rainforest plant species, 80% of which are endemic to New Caledonia. In total, 335 plant species, 55 reptile species, 9 bird species and 3 mollusc species are threatened or near-threatened by deer and pigs.

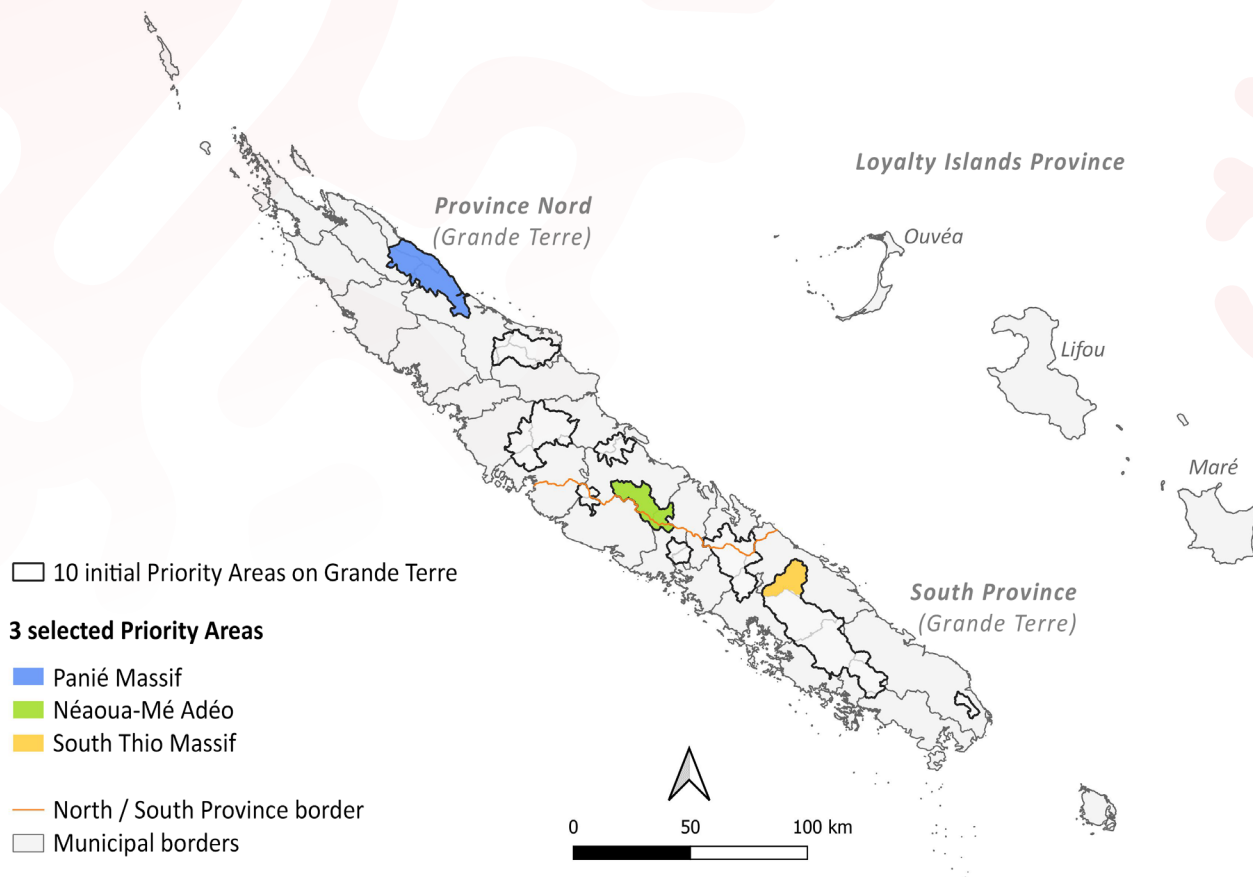
“Deer prevent the regeneration of undergrowth and degrade ecosystem services critical to the water cycle”

By eating native, supporting plants, deer prevent the regeneration of undergrowth and damage ecosystem services that are critical for the water cycle. Damage to the undergrowth accentuates erosion and the silting up of water catchments and streams during rainy periods. By limiting the replenishment of groundwater, it also causes watercourses to dry up during periods of drought.


The wild pigs present on both Grande Terre and the Loyalty Islands also cause damage to natural areas. They are as well responsible for damage to agricultural production, which plays an important role in tribal food security.

“Wild deer and pigs causing damage to cultivated fields”

Since its launch in 2008, the historical plan to regulate invasive ungulates, incentive-based and participatory, has mostly been implemented in accessible areas. Paradoxically, it has not benefited the priority, threatened rainforests due to the severe constraints of remoteness and lack of access. Deer and pig hunting for food is frequent near dwellings and tracks. Its reinforcement, through training and the diffusion of complementary techniques, has been identified as a promising solution to contribute to the sustainable reduction of damage caused by invasive ungulates, both in natural ecosystems and cultivated fields.



ISSUES & OBJECTIVES

 The main objective of the project is to deploy, for the first time in New Caledonia, professional control activities in three priority rainforest areas that are particularly remote and difficult to access. Until now, invasive ungulates control has been limited to private and feeding practices. **The project therefore aims to take a decisive step forward by professionalising these actions** so that they can be carried out in remote rainforests, which are particularly critical from the point of view of biodiversity and ecosystem services.

While the ultimate aim is to achieve significant benefits for preserving the rainforests, protecting water resources and ensuring the security of agricultural

production, the project had to overcome a major risk: that of being perceived as an intrusion on customary territory. **The social acceptance of the project** has thus become a central issue for its success, requiring sustained resources and efforts in terms of consultation, information and engagement of the local communities living in the targeted areas.

The **development of local capacities** has represented a third key challenge, needed to ensure that control efforts continue in a sustainable way and benefit the territory's communities.




INVASIVE UNGULATES CONTROL HAS 4 OBJECTIVES:

- ☒ Supporting the professionalisation of control operators
- ☒ Implementing control operations in priority rainforest areas
- ☒ Disseminating and making various participatory control techniques available
- ☒ Ensuring and maintaining local acceptance of these actions



OUTCOMES

 The project enabled the implementation of three complementary approaches to controlling invasive ungulates on Grande Terre as well as on Lifou and Maré on the Loyalty Islands. Thanks to sustained local consultation throughout the project and training for local stakeholders, the professional and participatory actions enabled 740 deer and 417 wild pigs to be controlled.

Beyond these numbers, **the project allowed the implementation of innovative, demonstrative actions and to boost a control dynamic supported by trained local stakeholders**, for the benefit of rainforests, cultivated fields and water resources.

The project received additional funding from Agence Rurale and provincial authorities. Thanks to the coordination of this funding by the New Caledonian Biodiversity Agency (ANCB), with the contribution of PROTEGE, it was possible to initiate and deploy, for the first time, control actions in three priority rainforest areas in terms of biodiversity and ecosystem services: the Massif du Panié, the Massif de Néaoua-Mé Adéo and the Massif de Thio.

“3 complementary approaches to controlling ungulates for the benefit of rainforests and cultivated fields”

A **concertation with customary authorities and local communities** was carried out continuously during the project, initially facilitated through service providers and then directly by the ANCB PROTEGE team. The consultation process took place in several phases. Initially, it consisted of requesting access to customary territories, to carry out actions or visit certain sites, through the relevant local representatives. Discussions on the delimitation of action areas provided an opportunity to inform stakeholders about the project, its objectives and expected results. They also helped to identify potential constraints and establish compromises. They also enabled the team to designate field facilitators according to their motivation and technical skills, and to mobilise them following their validation

by the customary authorities. These facilitators have helped to create and maintain a positive local dynamic by encouraging support for the project and strengthening interactions between the various stakeholders. More than 180 consultation meetings

were organised overall to prepare and coordinate the control actions, with contributions from 26 field facilitators and several associations.





For the first time in New Caledonia, professional control actions were carried out in priority areas of the Central Mountain Range rainforests, marking a significant step forward in invasive ungulates control.

To achieve this, specific training was developed and delivered in 2022 to 25 beneficiaries, who have thus become the territory's first professional control agents. More than half

of them are members of the project's partner tribes. They were selected from around thirty applicants from all over the country and delivered 10 training modules covering a wide range of skills needed for control. Speakers from the New Caledonian Hunting and Wildlife Federation (FFCNC), a professional from New Zealand (GOOD WOOD Aotearoa) and a first aid trainer covered aspects of safety, first aid, weapon adjustment and maintenance, and the use of innovative equipment such as the thermal scope. Skills in communication, surveying, monitoring actions and collecting information and biological material were also strengthened.

Following this training, 97 control missions were carried out in pairs between May 2023 and May 2024. In total, these pilot actions represented a control effort of 5,742 working hours, covering a surface area of 10,511 hectares located mainly in densely wooded areas close to rainforest cores. A total of 889 ungulates, mainly breeding does and fawns, were removed by these professional actions.

“Participatory hunting and trapping actions have made it possible to involve tribal community members”

“97 actions by the first professional control agents in the rainforests of the Central Mountain Range”

In addition, the project has implemented **participatory control hunting actions** of deer and wild pigs in the vicinity of the Central Mountain Range tribes, via services provided by the FFCNC. These activities relied mainly on volunteer hunters living in or near the action areas, who had received prior training to guarantee the safety and efficiency of the operations.

On Grande Terre, 50 “safety, gun maintenance and adjustment” training courses were organised by the FFCNC for 312 hunters in the project's three priority areas. In particular, 279 weapons were verified. In the Loyalty Islands, similar training was carried out on Lifou and Maré for 39 hunters, resulting in the verification of 41 weapons. The project has also taken out individual hunting insurance, together with the FFCNC membership card, as a prerequisite for taking part in participatory control hunting actions.

The project led to the supervision of participatory control hunting actions on Grande Terre (45 actions) as well as on Lifou (5 actions) and Maré (5 actions), in the form of beats, involving a total of 526 armed hunters and 188 dogs. These participatory actions resulted in the removal of 53 deer and 10 wild pigs, for a total action area of 2,208 hectares.



In terms of **participatory trapping**, the project organised 31 training courses in trapping wild pigs by using rope snares and cage traps to the benefit of 67 tribes. A total of 422 residents were given the opportunity to discuss the use of simple tools to reduce the damage caused by wild pigs. Training courses were held on Grande Terre (23 courses) as well as on the islands of Lifou (6 courses) and Maré (2 courses). To support this initiative, rope snares and 134 cage traps built by the New Caledonian Biodiversity Agency (ANCB), were made available to participants on a voluntary basis.

Follow-up with beneficiaries shows that these tools have been well adopted, despite fragmented responses to requests from the facilitators. On average, 45 trap-holders out of a total of 134 beneficiaries, responded to the facilitators' requests each

month, and at least 38 cage traps were set up each month, representing 28% of the equipment distributed. Between March 2022 and May 2024, at least 133 wild pigs were caught in this way. Among cage trap owners, 22 trappers tested the rope snare after the training course, and a minimum of 72 rope snares were laid during the project, resulting in the capture of 59 wild pigs.

Apart from the technical aspects, the participatory hunting and trapping actions have made it possible to involve local residents near the action areas. They have demonstrated that a collective contribution can effectively reduce the damage caused to fields by wild pigs and deer, while also providing a co-benefit in terms of preserving nearby forests.

The benefits of controlling invasive ungulates, in terms of abundance and impact on rainforests, have been the subject of the development of monitoring protocols and indicators as part of PROTEGE (see the "Deer abundance and impact monitoring systems" factsheet).



KEY FIGURES

25 
control agents
professionally trained

97 
missions
of professional control carried out for a total of 5,742 working hours

889 
ungulates
removed from the three priority areas, including 687 deer and 202 pigs

FIRST-HAND ACCOUNTS



CAROLE WEMA

PROTEGE facilitator at ANCB

The PROTEGE project has ushered in a new era in deer and wild pig control: for the first time, control actions have been initiated and deployed in three priority rainforest areas of the Central Mountain Range.

ROGER THEVEDIN

Customary President of the Xârâcùù area and beneficiary of trapping training



Pigs eat everything, and then we run out of food such as cassava and yams. Yams are important for our traditions, too. These pigs are a real nuisance and that's why we're so interested in coming to learn how to make traps to catch them.

PATRICK BARRIÈRE

ANCB Threats Unit Coordinator



While solid foundations have been laid in terms of control and monitoring, and while operational actions have been implemented in priority areas that had not previously benefited from the incentive and participatory control plan in place since 2008, mainly in easily accessible areas, continuing the actions undertaken with all stakeholders and amplifying the benefits remain a major challenge. The game is far from won, especially given the current crisis facing the region.



PROSPECTS AND SUSTAINABILITY

✓ Surveys carried out at the end of the project showed the satisfaction of local communities, who expressed their wish to see the actions continue both in terms of professional control and participatory approaches. This positive feedback is a major success, thanks to the territorial consultations rigorously carried out by the ANCB. Combined with the development of local capacities, this dynamic provides a **framework conducive to the continuation and extension of actions to control invasive ungulates**.

In this context, the Pacific Ecosystem-based Adaptation to Climate Change Plus (PEBACC+) project, implemented by the Secretariat of the Pacific Environment Programme (SPREP) and financed by the French Development Agency (AFD) through the Kiwa initiative, includes an activity to strengthen the control of invasive deer and pigs in Kouaoua. These efforts are part of an integrated approach that also combines better

fire management and the promotion of agroforestry practices to restore water security and preserve ecosystems.

“The threatened sustainability of a project acclaimed by local communities”

However, the challenge of reducing the impact of ungulates has never been greater, compounded by the major crisis affecting New Caledonia since May 2024. Control efforts, which have so far been insufficient to

stem the devastation caused to the forests, have been effectively halted by the restrictions on transport and the use of weapons imposed in this context of social tension. This raises fears that the benefits achieved to date will be compromised in the long term, while the economic crisis affecting the archipelago is jeopardising entities involved in ungulates management. The mobilisation of external funding is therefore a critical issue for the protection of a unique biodiversity, the ecosystem services it provides and local agricultural production.

KEY FIGURES

32 

training courses

on safety prior to participatory control hunting, with 346 participants

31  **training courses**

in trapping wild pigs, bringing together 422 participants from 67 tribes

131

cage traps

made available, with an average monthly utilisation rate of 21% recorded between March 2022 and May 2024



55

actions

of participatory control hunting, with 502 armed participants



DOCUMENTARY RESOURCES



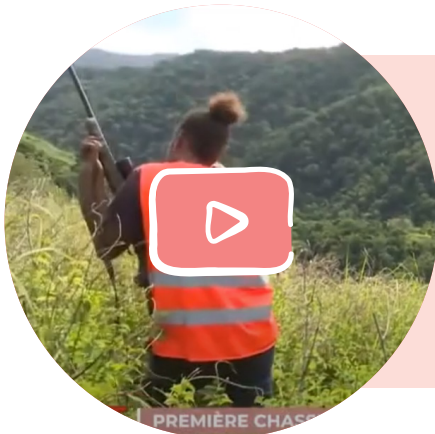
PROTEGE



Scan or click to access resources



Deer management through professional control in priority rainforest areas: training with local control agents

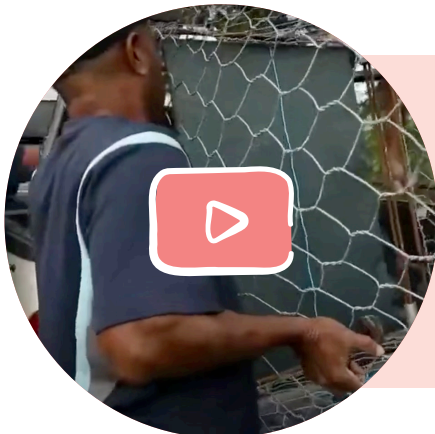


First PROTEGE participative hunt in Kouaoua and Lifou: local stakeholders trained to contribute to the control effort in priority areas close to tribes

Kouaoua



Lifou



participatory trapping training: disseminating techniques based on simple tools to protect cultivated fields as part of the overall control effort



PROTEGE (2023). Focus on invasive alien species (IAS) management actions
PROTEGE newsletter #17, 3p.



VIDEOS

NEWSLETTER



CONSULTATIONS

- New Caledonian Biodiversity Agency. 2021. Poster: Control of ungulates (wild pigs and wild goats) on the Loyalty Islands, scheduling of information meetings on Lifou. New Caledonia, 1p.
- New Caledonian Biodiversity Agency. 2021. Poster: Control of ungulates (wild pigs and wild goats) on the Loyalty Islands, scheduling of information meetings on Maré. New Caledonia, 1p.
- New Caledonian Biodiversity Agency. 2021. Report on the feedback meeting on the consultation-information service provided on Lifou and Maré by Environnement de la Mine au Récif (EMR, Environment from Mine to Reef). Koné, New Caledonia, 5p.
- New Caledonian Biodiversity Agency. 2021. Presentation of the role of the Field Facilitator. Fact sheet, New Caledonia, 1p.
- New Caledonian Biodiversity Agency. 2021. Flyer presenting the PROTEGE project on Grande Terre. New Caledonia, 2p.
- New Caledonian Biodiversity Agency. 2021. Flyer presenting the PROTEGE project on Lifou. New Caledonia, 2p.
- New Caledonian Biodiversity Agency. 2021. Flyer presenting the PROTEGE project on Maré. New Caledonia, 2p.
- New Caledonian Biodiversity Agency. 2024. Final report of the PROTEGE N°1 project on Consultation and Facilitation actions. New Caledonia, 32p. + appendices

SECTORISATION

- Dominique Y. et Verdier L.. 2024. Contribution to the characterisation and sectorisation of action areas within priority areas. BIOEKO deliverable for ANCB as part of the PROTEGE project. Full report (without appendices). New Caledonia, 48p.
- Dominique Y. et Verdier L.. 2024. Contribution to the characterisation and sectorisation of action areas within priority areas. BIOEKO deliverable for ANCB as part of the PROTEGE project. Map appendices. New Caledonia, 31p.

TRAPPING

- New Caledonian Biodiversity Agency. 2018. Flyer: Trapping wild pigs with rope snares. New Caledonia, 2p.
- New Caledonian Biodiversity Agency. 2018. Flyer: Trapping wild pigs with cage traps. New Caledonia, 2p.
- New Caledonian Biodiversity Agency. 2021. Poster: Training programme for trapping wild pigs on Lifou. New Caledonia, 1p.
- New Caledonian Biodiversity Agency. 2021. Cage trap monitoring sheet. New Caledonia, 1p.
- New Caledonian Biodiversity Agency. 2023. Training material for participatory trapping of wild pigs. New Caledonia, 45p.
- New Caledonian Biodiversity Agency. 2024. Survey form: Feedback on the trapping of wild pigs by people who have a cage trap available. New Caledonia, 3p.
- New Caledonian Biodiversity Agency. 2024. Final report of the PROTEGE N°2 project on trapping training and monitoring. New Caledonia.



PARTICIPATORY CONTROL HUNTING

- New Caledonian Biodiversity Agency. 2022. "Preliminary training for the participatory control hunting of invasive ungulates in the Néaoua Mé-Adéo and Thio areas" report. New Caledonia, 6p.
- New Caledonian Biodiversity Agency. 2022. "Preliminary training for the participatory control hunting of invasive ungulates in the northern areas of the Mount Panié Massif)" report. New Caledonia, 3p.
- New Caledonian Biodiversity Agency. 2023. "Supervision of participatory control hunting activities of invasive ungulates on Grande Terre" report. New Caledonia, 9p. + appendices.
- New Caledonian Biodiversity Agency. 2024. Additional report on participatory control hunting actions. New Caledonia, 4p. + appendices.
- New Caledonian Biodiversity Agency. 2024. Final report of the PROTEGE N°3 project on participatory control hunting actions. New Caledonia; 21p + Annexes.
- New Caledonian Wildlife and Hunting Federation. 2022. Report on participatory control hunting actions carried out on Maré from 17/05/2022 to 20/05/2022. FFCNC deliverable for the ANCB as part of the PROTEGE project. New Caledonia, 9p.
- New Caledonian Wildlife and Hunting Federation. 2022. Report on participatory control hunting actions carried out on Lifou from 21/06/2022 to 24/06/2022. FFCNC deliverable for the ANCB as part of the PROTEGE project. New Caledonia, 9p.

PROFESSIONAL ON THE GROUND CONTROL

- New Caledonian Biodiversity Agency. 2022. Summary sheet on data collection during Professional Ground Control operations. Fact sheet, New Caledonia, 1p.
- New Caledonian Biodiversity Agency. 2022. Summary of the Professional Ground Control technique. Fact sheet, New Caledonia, 4p.
- New Caledonian Biodiversity Agency. 2022. Training framework for the Professional Ground Control of invasive ungulates in New Caledonia. New Caledonia, 6p.
- New Caledonian Biodiversity Agency. 2023. Report on the first 7 months of Professional Ground Control. New Caledonia, 20p. + appendices.
- New Caledonian Biodiversity Agency. 2023. Summary of the first 7 months of Professional Ground Control. New Caledonia, 4p.
- New Caledonian Biodiversity Agency. 2024. Summary note: Additional technical and safety information for users of thermal eyewear. New Caledonia, 4p.
- New Caledonian Biodiversity Agency. 2024. Final report of the PROTEGE N°4 project on Professional Ground Control Actions. New Caledonia, 29p.
- New Caledonian Biodiversity Agency. 2024. Presentation material: Additional technical and safety information for users of thermal eyewear. New Caledonia, 26p.
- Coulson G. 2022. Report on the PROTEGE "Professional Ground Control" training course. Deliverable from Good Wood Aotearoa Ltd for the ANCB as part of the PROTEGE project. New Zealand, 12p.
- Coulson G. 2022. Presentation material: Pest Control in New Zealand: An overview of deer, pig, cat and rabbit control. Deliverable from Good Wood Aotearoa Ltd for the ANCB as part of the PROTEGE project. SPC Auditorium, Nouméa, New Caledonia, 62p.
- New Caledonian Wildlife and Hunting Federation. 2022. Professional repository of FFCNC modules for the PROTEGE "Ground Control Agent" training course. FFCNC deliverable for the ANCB as part of the PROTEGE project. Fact sheet, New Caledonia, 4p.



Find all the lessons-learned factsheets on
invasive alien species **freely available on our website.**



PACIFIC TERRITORIES REGIONAL PROJECT FOR
SUSTAINABLE ECOSYSTEM MANAGEMENT

protege.spc.int/en



Pacific Community
Communauté du Pacifique



SPREP
PROE



Funded by
European Union



GOVERNEMENT DE LA
NOUVELLE CALÉDONIE



FRENCH POLYNESIA



WALLIS AND FUTUNA



PITCAIRN ISLANDS

This publication was produced with the support of the European Union. The contents of the publication remain the sole responsibility of the Secretariat of the Pacific Regional Environment Programme and the Pacific Community, and cannot in any way be considered to reflect the views of the European Union.