Last questions concerning the 3rd National Actions Plan for European Mink in France

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DREAL : Aurore PERRAULT

Plan national d'action pour le
Vison d'Europe

Agenda

Organisation of this online meeting (5')

1. **Introduction and news** (30')
   a) Reminder: role of the scientific council
   b) 3rd PNA construction schedule
   c) Proofreading and comments taken in account

2. Points needed to be decided by "you"

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Role of the scientific council (CS)

- Consultation on scientific topics
  - By meeting: face-to-face + online
  - By a collaborative platform
- Meetings as much as needed
- 8 permanent members:
  - M. Philippe BERNY (VetAgro Sup)
  - M. Sébastien DEVILLARD (University of Lyon)
  - Mme Christine FOURNIER (GREGE)
  - M. Tiit MARAN (Zoo of Tallinn + EEP coordinator)
  - M. Johan MICHAUX (University of Liège)
  - M. Madis PODRA (LIFE lutreola Spain)
  - Mme Audrey SAVOURE-SOUBELET (SFEPM)
  - M. Julien STEINMETZ (OFB-DR)
- Ad hoc experts → today: Mme Sandrine RUETTE (OFB-DRAS)
- Goal of today: **take consensual decisions about the differing comments!**

Planning of the 3rd PNA

2019		Drafting of the PNAi's report
	2 April	COPIL*: validation PNAi's report
	May-June	CNPN**: validation PNAi's report
	28-29 May	Working groups on 3rd PNA's thematic
	12 June	CS***: results of the working groups & ideas for 3rd PNA
		Drafting of the main axes of the 3rd PNA
2020		Exchanges and consultation
		Drafting of the actions the 3rd PNA
2021	Jan-Feb	COPIL + CS: comments on the draft of 3rd PNA
		Taking into account all comments done
	3 May	CS: exchanges about the differing comments
	1st June	COPIL: validation of the 3rd PNA
	17 June	CNPN: validation of the 3rd PNA

* Steering Committee **National Council for Nature Protection *** Scientific Committee

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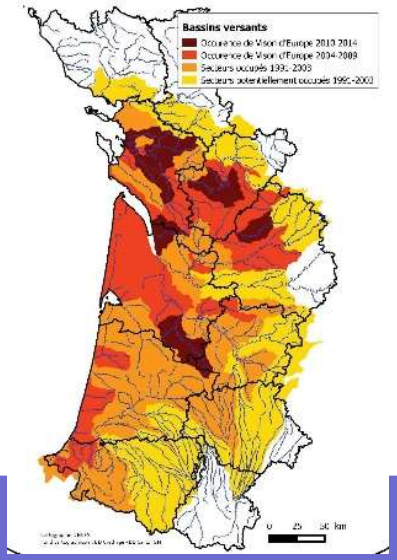
Comments taken into account

- Draft of the 3rd PNA = 131pages = more than 1,200 comments
  - Some were « easy » (e.g.: missing words, faults)
  - Some others were « more complicated » (e.g.: misunderstanding, partial results, newer results)

- A lot of modifications concerning the translocations already done:
  - For each project Russian, Estonian, Spanish…
  - More details: when, where, how many, individuals from where
  - When information available: mortality rate, causes of death

- French distribution of European mink:



- Modified error: 2020 → 2015

- The maps is voluntary not actualised because all the prospections are not all done

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Comments taken into account

- We have also:
  - Added the calendar in each action file:

Implementation schedule	Sub-action	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	N°5.2.1										
	N°5.2.2										

  - Almost finished the financial evaluation of the 3rd PNA:

	Action 1	Action 2	Action 3	Action 4	Annual total
Axe 1	171 500	172 000	34 500	18 500	396 500
Axe 2	61 500	131 000	-	-	192 500
Axe 3	8 500	226 500	?	-	?
Axe 4	44 500	101 500	-	-	146 000
Axe 5	33 000	18 000	-	-	51 000
					?

+ 74,000€ (1 person) / year for PNA's global animation: CS/COPIL organisation, financial coordination, international coordination, intermediate and final reports…
→ At least 8,140,000 € / 10 years + "?" → about 10,000,000 € / 10 years

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Comments taken into account

All comments accepted except:

- Instructions from the ministry:
  - Introduction = maximum 1p → no details
  - Part I « State of knowledge » = maximum 15p → most relevant
  - Action file = autonomous → little bit long because of the « context part »
- Consistency with the original documents:
  - Some terms do not reach a consensus → keep the original terms
- Bibliographical references:
  - Sometimes many references for one topic → keep the 3 most relevant

→ Some differing comments remain…

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Lunch break around midday (French time)

   e. 13:00 - Consider genetic homogeneity as a cause of decline of the European mink ?
   f. 13:30 - Raccoon: is there a threat to the European mink? If « yes », which action(s) have to be done during the 3rd PNA?
   g. 14:15 - Action 3.3.1: what is relevant to study to improve the control strategy of the American mink?
   h. 15:00 - Achievement and efficiency indicators

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American mink name (5')

- Currently, what is the Latin name for the American mink?
  - ***Neovison vison* or *Mustela vison*?**

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Action 1.2: is this better drafted? Agree with priority level? (30')

- Many comments done. All of the same kind :
  - "Context not clearly related to the action description"
  - "Action file is grouping distinct things"
  - "Expectations are not clear"…

→ Total rewriting of the action file and separation in 2 sub-actions

- You received this new action file with the agenda

- **Is this better drafted? Agree with the priority level?**

⚠ Today we don't define future protocols

Action description	Action n°1.2: Characterise European Mink populations	**Priority 2**
	To characterise wild populations of European Mink in France, the first step is to determine their structure (nuclei, isolated individuals, etc.). Various methods can be used (survey efforts and methods, individual monitoring, collection of genetic material, etc.). Other studies aimed at refining knowledge on populations may be carried out (life cycle, habitat, population dynamics, etc.). To do this, the national and international scientific partnerships that have been set up, particularly in the field of genetics, will have to be consolidated. Finally, an assessment of the knowledge acquired will be published.	

→

Action description	Action n°1.2.1: Characterise European Mink nuclei populations	**Priority 1**
	To characterise wild populations of European Mink in France, the first step is to determine their structure: nuclei or isolated individuals, reproduction, parentage, rate of hybridisation with the European Polecat. Various methods can be used: surveys, individual radio-tracking, collection of genetic material. To do this, the national and international scientific partnerships that have been set up, particularly in the field of genetics, will have to be consolidated.	
	Action n°1.2.2: Improve knowledge on habitat use	**Priority 2**
	Other studies aimed at refining knowledge on habitat use may be carried out: space occupation, habitats, types of dens, diet. Various methods can be used: surveys, individual radio-tracking, collection of genetic material.	

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Action 1.1.2: no modification of the priority level? (30')

- Some differing comments concerning the levels of priority:

Axis 1: Improve knowledge about the European Mink	
Action 1.1: Monitor changes in the range of the European Mink	
Sub-action n°1.1.1: Update the European Mink distribution map with validated data	1
Sub-action n°1.1.2: Assess and compare alternative methods to capture survey campaigns	2

Some actions are divided into sub-actions because they do not necessarily have the same priority. Thus, each sub-action is assigned a priority level:

- "Priority 1": highest priority level: priority actions to be implemented imperatively during the PNA 3
- "Priority 2": intermediate priority level: actions that have to be done secondarily
- "Priority 3": lowest priority level: actions implemented depending on opportunities and time available

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Action 1.1.2: no modification of the priority level? (30')

Sub-action n°1.1.2: Assess and compare alternative methods to capture survey campaigns	Priority 2

Continue assessing alternative methods:

Testing of alternatives to cage traps as methods for the detection of the European Mink will be continued and finalised. Priority will be given to the hair trap method coupled with footprint traps (with genetic analyse). The techniques of camera-traps and environmental DNA and the use of an accredited dog will be continued, depending on the possibilities and opportunities.

Comparison and assessment of the alternative methods tested:

PNA 3 will have to give rise to a comparative assessment of the techniques that can potentially be used to detect the European Mink. To this end, the results of the LIFE VISON and others programmes using hair traps, footprint and camera traps will have to be analysed and compared (detection rate, environmental variables, periods) with the results of the cage-trap survey campaigns. The results obtained by other alternative methods (eDNA, European Mink and American Mink-accredited Dog) will also be compared (see previous paragraph).

The comparison of methods as a whole should lead to the continued improvement and regular updating of the protocols used in sub-action n°1.1.1. For example, the protocol may propose one or more combined methods depending on the sector under consideration. Finally, the combined method(s) must be standardised, transferable and applicable on a large scale.

Continuous monitoring of alternative methods:

Throughout PNA 3, a bibliographic watch, nationally and internationally, will make possible to implementing or assessing any new alternative techniques that could potentially be used to obtain data on the presence of the European Mink in France.

Action 1.1.2: no modification of the priority level? (30')

- For now, no change because:
  - Sub-action 1.1.1 will take in account the results of sub-action 1.1.2 on the days of completion of the protocol, but does not require the sub-action 1.1.2 be fully implemented

- **What is your opinion?**

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Action 3.1: no modification of the priority level? (30')

- Some differing comments concerning the levels of priority:

Axis 3: Limit the impact of the American Mink and other non-native species on the European Mink	
Action 3.1: Control the sources of American Mink invasion in the natural environment	
Sub-action n°3.1.1: Verify the state of American Mink fur farms	3
Sub-action n°3.1.2: Verify keeping conditions of owners other than fur farms	2
Sub-action n°3.1.3: Provide the expertise required for changing the reglementary status of the American Mink in France	1

Some actions are divided into sub-actions because they do not necessarily have the same priority. Thus, each sub-action is assigned a priority level:

- "Priority 1": highest priority level: priority actions to be implemented imperatively during the PNA 3
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Action 3.1: no modification of the priority level? (30')

Sub-action n°3.1.1: Verify the state of American Mink fur farms	Priority 3

Update the technical guidelines on security and escape prevention for French American Mink farms:

This will involve establishing a list of all the points of vigilance and technical adjustments recommended within the farms to avoid vandalism or the involuntary escaping of animals. Technical support for farms ceasing their activity will be offered. These guidelines will be broadly disseminated among the farms present and the State services of the regions and departments concerned.

Set up an emergency procedure in the event of escape from the farms still present in France:

On the basis of the document drawn up in 2011 (LPO and DREAL, 2011) and the technical guidelines cited above, an emergency procedure (methods of action in the event of mass escapes, methods of monitoring …) for French American Mink farms will be drawn up, validated and disseminated in concertation with the State services concerned.

Action 3.1: no modification of the priority level? (30')

- For now, no change because:
  - There is no more A. mink farm in the area of implementation of the 3rd PNA
  - In the Covid19 context, French ministry have announced that all the A. mink farms will be closed by 2025 in all France
  - There is still some private owners of A. mink in the area of implementation of the 3rd PNA and (we assume) it will be still allowed after 2025 in France

- **What is your opinion?**

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Consider genetic homogeneity as a cause of decline of the European mink? (30')

- For now, threats factors of European mink in France are:

A genetic study was carried out for the first PNA, which demonstrated that the western nucleus was characterised by genetic homogeneity (DIREN Aquitaine and Mission Vison d'Europe, 2003; Michaux *et al.*, 2005). However, this nucleus is not genetically isolated from eastern nuclei: all European populations of the European Mink make up one genetic management unit (a term used to describe populations which share a sufficiently common genetic pool to be managed jointly in conservation plans) even if they are far apart geographically (Cabria *et al.*, 2015).

- **Do we have to consider "genetic homogeneity" as a threat?**

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Raccoon: is there a threat to the European mink? If « yes », which action(s) have to be done during the 3rd PNA? (45')

- Some differing comments concerning the Raccoon

→ For now, Raccoon is considered as a potential threat for the E. mink

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Raccoon: is there a threat to the European mink? If « yes », which action(s) have to be done during the 3rd PNA? (45')

- In Part I "European mink: state of knowledge"
  - Part 6 "Threats and limiting factors"

h. Competition with the Raccoon

In France, there are 3 large Raccoon (*Procyon lotor*) population nuclei: the oldest in the north east of France coming from the joining together of historical nuclei in Aisne and Alsace/Lorraine/Vosges and 2 more recent in Gironde and Auvergne (Leger and Ruette, 2014; Maillard *et al.*, 2020). Data has started to be recorded in Charente and Charente-Maritime (LPO *et al.*, 2020) indicating the formation or expansion of an unsuspected dwelling up until 2013 close to the nucleus of European Mink.

To date, raccoon and its impact have been studied very little in Europe. Recent studies (Bartoszewicz et al., 2008; Fischer et al., 2017; Duscher et al., 2018) have focused on population density, range and diet. All the studies agree on the need for supplementary data to evaluate the ecological, economic and sanitary consequences of expanding populations. Evaluating potential consequences on the conservation of European Mink is necessary as the Raccoon consumes a significant share of aquatic prey (amphibians, crayfish) and as it develops quickly and may dwell in the same environments as the European Mink, while remaining opportunistic (Salgado, 2018; LPO et al., 2017). Raccoon is also potentially the carrier of pathologies affecting carnivores that it could transmit to wild populations.

Raccoon: is there a threat to the European mink? If « yes », which action(s) have to be done during the 3rd PNA? (45')

- In Part IV "Actions to be implemented under the 3rd PNA"
  - Axis 3 "Limit the impact of American mink and other non-native species on the European mink"
    - Action 3.3 "Acquire better knowledge about the American mink and other non-native species to improve control"

Sub-action n°3.3.2: Study the potential impact of other non-native species on the European Mink	Priority 3

It would seem to be expedient, in the framework of PNA 3, to study and determine the possible impact of the Raccoon on the European Mink (preferred habitats? Diet?) and propose a control strategy if necessary. A study protocol should be defined that responds to the targeted questions and is realistic with regard to its implementation. To achieve this, a bibliographical study of available knowledge concerning the species will be carried out. The results will be published in summary reports and disseminated as broadly as possible. Any gaps in knowledge that would be useful for setting up a control strategy, if one is needed, could thus be identified and lead to the carrying out of complementary studies.

Watch operations will be implemented concerning the arrival of other non-native species in the natural environment and their possible impacts on European Mink populations in order to be able to set up of reactive measures.

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Raccoon: is there a threat to the European mink? If « yes », which action(s) have to be done during the 3rd PNA? (45')

- **Shall we keep the Raccoon as a potential threat?**
- **If yes, which actions implemented? Which level of priority?**

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   h. 15:00 - Achievement and efficiency indicators

Action 3.3.1: what is relevant to study to improve the control strategy of the American mink? (45')

- Some differing comments concerning the need to study A. mink

Axis 3: Limit the impact of the American Mink and other non-native species on the European Mink							
Action 3.1: Control the sources of American Mink invasion in the natural environment							
Sub-action n°3.1.1: Verify the state of American Mink fur farms	3						
Sub-action n°3.1.2: Verify keeping conditions of owners other than fur farms	2						
Sub-action n°3.1.3: Provide the expertise required for changing the reglementary status of the American Mink in France	1						
Action 3.2: Control the American Mink found in the natural environment inside the PNA area							
Sub-action n°3.2.1: Refine and implement the control strategy	1						
Sub-action n°3.2.2: Improve the efficacy of American Mink control	2						
Sub-action n°3.2.3: Study possible reglementary adaptations in the framework of American Mink control	2						
Action 3.3: Acquire better knowledge about the American Mink and other non-native species to improve control							
Sub-action n°3.3.1: Study the American Mink to improve the control strategy	2						
Sub-action n°3.3.2: Study the potential impact of other non-native species on the European Mink	3						

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Action 3.3.1: what is relevant to study to improve the control strategy of the American mink? (45')

- Some differing comments concerning the need to study A. mink

Sub-action n°3.3.1: Study the American Mink to improve the control strategy	Priority 2
It would be useful to coordinate the work of collecting American Mink samples in order to precise the dynamics of the population in France (dispersion, habitats used) and to help adapt the control strategy. This will be done coherently with the protocol presented in the action concerning the implementation of a European Mink health-monitoring programme (see sub-action n°1.3.1). In function of the questions raised, other studies could be implemented in the framework of the 3rd PNA. They should provide responses to the targeted questions. The results will be published in summary reports and disseminated as broadly as possible. They will be used to better adapt the American Mink control actions.	

- **For you is it really necessary?**
- **If « yes », what is needed to be study by the 3rd PNA?**
- **With which level of priority?**

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   h. 15:00 - **Achievement and efficiency indicators**

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Achievement and efficiency indicators (45')

- You received a global table (annex) with all the indicators of each action

Numéro et nom de l'action	Priorité	Livrables	Indicateurs	Evaluation financière
Axe 1 : Amélioration des connaissances sur le Vison d'Europe				**3 965 000**
Action 1.1 : Suivre l'évolution de l'aire de répartition du Vison d'Europe				
Sous-action n°1.1.1 : Mettre à jour la carte de répartition du Vison d'Europe avec des données validées	1	- Bilan détaillé de la 1ère phase du protocole de prospection - Bilan détaillé de la 2e phase du protocole de prospection - Méthodologie d'interprétation des données pour qualifier les zones de présence du Vison d'Europe en France - Cartes de l'aire de répartition du Vison d'Europe en France - Bilans comparatifs des techniques potentiellement utilisables pour détecter le Vison d'Europe	- Nombre de campagnes de prospections réalisées, par type de méthode utilisées - Nombre de méthodes testées	1 715 000
Sous-action n°1.1.2 : Tester et comparer des méthodes alternatives aux campagnes de prospections par capture	2			
Action 1.2 : Caractériser les populations de Vison d'Europe				
Action n°1.2.1 : Caractériser les noyaux populations de Vison d'Europe	1	- Publication(s) des connaissances acquises	- Nombre de noyaux caractérisés - Nombre d'études sur l'utilisation de	1 720 000

- According the national circular (2017): *the objective of the evaluation of a PNA is to measure, in the long term, the effectiveness of the actions, in particular using indicators set accordingly for each action. The nature of the questions asked determines the choice of the evaluator.*

- For now, we have at least 1 indicator for each sub-action

Do you have ideas of better indicators?

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GREAT JOB!

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Thanks to all partners!

Hope to see you soon in the wild