Centre national de référence pour le bien-être animal

First report of the FRCAW on behalf of the French Observatory for the Protection of Domestic Carnivores (OCAD)

Initial survey of the abandonment of dogs and cats in France

Request authorised by DGAL (French Directorate General for Food): 09/11/2021

Report issued by FRCAW: 04/03/2022

Background as described by the requesting body:

'The fight against animal abandonment figures as a major societal concern in France but there are still very few studies on the issue. Such studies are nevertheless essential to the provision of better guidance for public policy on this subject.
In 2021, as part of the French recovery plan, 20 million euros were allocated to an action plan to tackle abandonment. One element of this action plan is the creation of an Observatory for the Protection of Domestic Carnivores, to be comprised of a steering committee, administrative support and an expert body, and whose main mission is to generate and communicate knowledge on the protection of these animals and to propose pathways for the improvement of public policy.
Additionally, the French parliamentary bill to strengthen the fight against animal abuse provides, in paragraph 3 bis A, for 'the communication of supplementary data concerning the traceability and health history of animals.'

Request:

The primary mission requested of the expert body (FRCAW) is to carry out an analysis of the current information recorded in the database of the French identification register for domestic carnivores (I-CAD), particularly that concerning animals (dogs and cats) whose identification records show that they are not/are/were no longer in the care of individuals, in order to provide clarification on the concept of abandonment.

In addition to this clarification, the FRCAW is asked to:

1. carry out a mapping exercise for abandoned animals as a function of their status based on statements from practitioners;
2. propose initial hypotheses on the causes of abandonment and/or the risk factors associated with every possible status that could affect animal welfare.

Following these tasks, the FRCAW will conduct a gap analysis to identify the additional data (by type and provenance) required to achieve a better understanding of the processes by which animals come to enter pounds and shelters.

References:

Regulatory texts:

- Arrêté du 3 avril 2014 fixant les règles sanitaires et de protection animale auxquelles doivent satisfaire les activités liées aux animaux de compagnie d'espèces domestiques relevant du IV de l'article L. 214-6 du code rural et de la pêche maritime. (https://www.legifrance.gouv.fr/loda/id/JORFTEXT000028856756/, 23/02/2022)
- Arrêté du 1er août 2012 relatif à l'identification des carnivores domestiques et fixant les modalités de mise en œuvre du fichier national d'identification des carnivores domestiques. (https://www.legifrance.gouv.fr/loda/id/JORFTEXT000026269678/, 23/02/2022)
- Code rural et de la pêche maritime (CRPM) - Chapitre Ier : La garde des animaux domestiques et sauvages apprivoisés ou tenus en captivité (Articles L211-1 à L211-32) (https://www.legifrance.gouv.fr/codes/section_lc/LEGITEXT000006071367/LEGISCTA000006138321/, 23/02/2022)
- Code pénal - Chapitre Ier : Des sévices graves ou actes de cruauté envers les animaux (Articles 521-1 à 521-2) (https://www.legifrance.gouv.fr/codes/section_lc/LEGITEXT000006070719/LEGISCTA000006149860/#LEGISCTA000044394135, 23/02/2022)
- Plan d'actions pour lutter contre l'abandon des animaux de compagnie (2020).

Scientific texts:

- EAGAN B.H., GORDON E., FRASER D. (2021). The effect of animal shelter sound on cat behaviour and welfare. Animal Welfare. 30, 431 – 440.
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- RAUDIES C., WAIBLINGER S., ARHANT C. (2021). Characteristics and Welfare of Long-Term Shelter Dogs. Animals. 11, 194.
- TITEUX E., GILBERT C., DIEDERICH C. (2021). Gonadectomie chez le chien et le chat : à réaliser au cas par cas. Le Point Vétérinaire. 52, Nº. 419-420, 14-20
- TORREY EF, YOLKEN RH. (2013). Toxoplasma oocysts as a public health problem. Trends Parasitol. 29, 380-384.

Grey literature:

- FACCO (2021). Rapport annuel 2021. (https://www.facco.fr/wp-content/uploads/2021/06/FACCO-RAPPORT-2021-WEB.pdf, 23/02/2022)

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Glossary

Animal found roaming: 'Any dog that, other than for the activities of hunting, guarding, or protection of herds and flocks, is no longer being effectively monitored by its master and finds itself beyond hearing of the voice of its owner or of any whistle or similar instrument that would allow it to be called back, or which has moved more than 100 metres away from its owner or the responsible person, is deemed to be found roaming.

Any unidentified cat that is more than 200 metres from dwellings or any cat found more than 1000 metres from its owner's home and which is not under the direct surveillance of the latter, as well as any cat whose owner is unknown and which is found on the public highway or on another person's property, is deemed to be found roaming.' *(Source: Article L211-23, CRPM)*

Animal protection society (APS): Non-profit organisation with at least two volunteers working together on a project (in the case of the APS, the protection of animals). An APS can, under French Law 1901, be recognised as providing a public service and can thus benefit from donations and legacies *(Source: la-spa.fr)*

Classified dogs: Dogs considered to be dangerous under French law and subject to a particular regulation regime dividing them into two classes (1 and 2). A keeper's licence is required to own these dogs.

Class 1 dogs: These are commonly known as 'attack dogs'. They can be of three types (the French Ministry of Agriculture understands 'type' to mean dogs that can be assigned to a breed via their morphological characteristics and are not entered in an official French stud book (LOF)):

- American-type Staffordshire Terriers ('Pit Bulls')
- Mastiff type ('Boerboels')
- Tosa type

All acquisitions, relinquishments, introductions and imports of a Class 1 dog are forbidden in France (L215-2 CRPM)

Since 1 January 2010, all caretakers of Class 1 or 2 dogs must hold a keeper's licence. *(Source: agriculture.gouv.fr)*

Class 2 dogs: known as 'guard and defence dogs'. They can be of three breeds (registered in the LOF) and of 1 type:

- American Staffordshire Terrier breed
- Rottweiller breed
- Rottweiller type
- Tosa breed

Since 1 January 2010, all caretakers of dogs in Classes 1 and 2 must hold a keeper's licence. *(Source: agriculture.gouv.fr)*

Change of ownership: Transfer of the ownership of an animal from a relinquishing party (owner) to a receiving party (adopter). Details of these changes are based on the declarations provided by the relinquishing or receiving parties to the national identification database. *(Source: I-CAD)*

Declaration of abandonment: document required by certain shelters when an owner surrenders his or her animal to them. This is a permanent document officially formalising a transfer of ownership between the relinquishing party and the shelter. The declaration is definitive and without restrictions or conditions. *(Source : I-CAD)*

Domestic carnivores: Domestic carnivores include the following species : cats, dogs, ferrets. In the present OCAD report, the term 'domestic carnivores' designates dogs and cats only.

Free cat: A cat that has been identified and sterilised but has no owner and lives in the wild. Its identification is linked to a moral person who provides /pays for its care (in most cases an animal protection society). Free cats are therefore not counted as part of the adoption system following their identification and sterilisation.

Identification: Action performed by a veterinarian involving the implantation of a bio-compatible subcutaneous device (microchip) or the tattooing of the animal, in order to provide it with a unique identification number that is registered in the national identification database. The identification of a companion animal represents the only official link between the animal and its owner. *(Source :* www.i-cad.fr*)*

Identification status: The identification status of an animal depends on whether the animal has or has not been registered in the national identification database for domestic carnivores (FNICD), following the performance of the identification procedure by a veterinarian. In the present report, the identification status of animal is as follows : identified or non-identified.

Kantar: Data and research institute commissioned by other companies or institutions to carry out, among other things, surveys and statistical reports

Lost animal: A lost animal, as discussed in this report, is a dog or cat that is identified (via microchip, tattoo, identification disc) and has an owner but which is found roaming (collected by a pound or a shelter). If the owner of a lost animal cannot be traced by the pound, the animal is then considered to be abandoned.

Pound: A pound in France can be a public (municipal or intercommunal) or private (SACPA) facility designed to receive animals found straying or roaming and to detain them in a way that respects their welfare. The maximum holding period is 8 working days (Cf L211-25 and L211-

26 of the CRMP), after which an animal unclaimed by its owner is transferred to a shelter, and beyond which it may be euthanised should no shelter be available to house it.

Seized animal: Dog or cat removed from its home by the French rural or national police services, or by the DDPP veterinary services (L214-23 CRPM) on the grounds of active and/or passive (neglect, inattentiveness) abuse, and transferred to a shelter or a society for animal protection *(Source : service-public.fr)*

Sex ratio: Relationship between the number of males and females of the same species. In this report, the sex ratio is calculated on the basis of comparison between male and female domestic carnivores.

Shelter: non-profit facility run by a foundation or society for the protection of animals that has been recognised as such by the regional prefect, receiving and looking after animals that have either come from a pound, having exceeded the holding period permitted under Articles L211-24 and L211-25 of the CRPM, been surrendered (directly) by their owners, or have been seized from a private home.

Sterilisation/neutering (castration/spaying): surgical intervention which renders the animal unable to reproduce via the ablation of the male or female sexual organs.

Stray animal* [*translator's note. This definition differs from common definitions of 'stray' animals in English-speaking countries]**:** Stray animals as discussed in this report, are animals that have no known owners and are living in the wild. Stray animals are neither identified nor sterilised. These animals can be considered to be abandoned and are thus included in the population of companion animals.

Toxoplasmosis : disease caused by a protistan parasite (Toxoplasma gondii), being particularly dangerous for pregnant women or immunosuppressed people. This parasite found in cat excrement, which is its reservoir, can be transmitted either directly or indirectly (via contaminated litter, raw fruit and vegetables) and by consuming foodstuffs from intermediate hosts infected by the parasite (i.e. the insufficiently cooked meat of sheep, horses, pigs and cattle).

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Abbreviations

CRPM : Code Rural et de la Pêche Maritime (French Rural and Maritime Fishing Code, hereinafter referred to as Rural Code)

FACCO : Fédération des Fabricants d'Aliments pour Chiens, Chats, Oiseaux, et autres animaux familiers (Federation of makers of food for dogs, cats, birds and other pets)

FRCAW: French Reference Centre for Animal Welfare (CNR BEA)

I-CAD : Manages the French national identification database for domestic carnivores (FNICD) as a delegated public service with the French Ministry of Agriculture

INSEE : Institut National de la Statistique et des Etudes Economiques (French institute of statistical and economic studies)

LOF : Livre des Origines Françaises (French Stud Book (dogs))

LOOF : Livre Officiel des Origines Félines (Official French Stud book for Cats)

1. Background to the first expertise

1.1. Study goals and methodology

1.1.1. The challenges of abandonment

In its action plan to combat the abandonment of companion animals (2020), the French Ministry of Agriculture and Food describes France as one of the countries that are '*most afflicted by this scourge*', and therefore views the fight against abandonment as a government priority.

To combat cat and dog abandonment effectively, it is necessary to understand its causes and associated risk factors, so that the most appropriate practical levers for action can be identified. In addition to the causes and risk factors, there would also appear to be a need to examine the consequences of abandonment for the individual animals concerned. Indeed, just as action on the causes and risk factors associated with abandonment would help reduce its incidence, action on its consequences would help reduce its impacts on the welfare of abandoned dogs and cats.

Meanwhile, the highly emotive nature of the subject of abandonment has led to the persistence of a number of common misconceptions as to its causes and consequences. This is also related to the limited availability of detailed and dependable data on the issue of abandonment. The task for OCAD[1] in this domain is therefore to succeed in establishing the causes, associated risk factors, and consequences of abandonment by means of an analysis founded on relevant and reliable evidence.

1.1.2. The goals of this report

As explained in its preliminary remarks, the FRCAW aims, through the present report, to clarify the concept of dog and cat abandonment and to provide a measured view of the subject through examination of each of the various categories of abandoned animals.

This report also seeks to provide a quantitative and qualitative account of the data that is currently available on the abandonment of domestic carnivores (dogs and cats), thereby providing direction for OCAD's future work. To achieve this, the task was carried out in three stages. The first stage involved the clarification of the concept of abandonment through definition of the term and a description of the methods by which its incidence is calculated. Abandonments in France were then mapped, providing information on the categories of abandoned animals and showing the patterns of admission to pounds and/or shelters. Last, a number of the causes and consequences of abandonment were examined through the lens of initial expert hypotheses.

[1] Observatory for the protection of domestic carnivores

1.1.3. Methodology

To carry out this initial study, the FRCAW has drawn on three complementary sources of information: data held in the national database for the identification of domestic carnivores, responses from shelter and/or pound managers, and expert knowledge provided by the scientific and technical members of the FRCAW network. This methodology has allowed the FRCAW to produce a cross-section of viewpoints in approaching the subject of abandonment and to put forward recommendations across the spectrum and informed by complementary participants.

1.1.3.1. Analysis of the data from the French national identification database for domestic carnivores

As a first step, discussions were held between the FRCAW and I-CAD[2] in order to gain an understanding of the way that available data on categories of abandoned animals are organised, enabling FRCAW to identify which data on the identification[3] of animals were relevant for study in this survey. These discussions also allowed us to identify a certain number of potential reasons/motivators for abandonment and to develop initial hypotheses concerning its causes and risk factors.

The FRCAW then conducted an analysis the data in the national identification database for domestic carnivores with the help of I-CAD to test some of the hypotheses developed in the course of these discussions.

All quantified data cited in this report is taken from the national identification database for domestic carnivores, except where other sources are explicitly indicated.

1.1.3.2. Preliminary information collected from practitioners

To refine the information obtained via the national identification database for domestic carnivores, the FRCAW sought to obtain a first set of responses from a small number of practitioners, particularly managers of shelters, pounds, and shelter-pounds. To this end, a questionnaire (Annexe 1) was created and sent to six representatives of pounds and shelters sitting on the OCAD steering committee, who then passed it on to a number of pound and/or shelter managers in their organisations. The organisations involved were the CNDA (French Confederation for Animal Protection), EFA (Ethics for Animals), the 30 millions d'Amis (30 million friends) Foundation, the FBB (Brigitte Bardot Foundation) the SACPA group (private service provider for the assistance and control of the animal population), and the SPA (French Society for the Protection of Animals).

[2] Identification of domestic carnivores
[3] Registration of an animal in the national identification database for domestic carnivores in France via a tattoo or a microchip.

The questionnaire contained four general sections, followed by two supplementary sections for either shelters/societies or pounds respectively. These were:

1. Definition of abandonment
2. Causes of abandonment
3. Risk factors for abandonment
4. Consequences of abandonment
5. Supplementary sections: Questions for shelters/societies only / Questions for pounds only

As part of the audit, this questionnaire had three main purposes. These were to:

1. identify reasons/motivators for abandonment
2. collect the views of practitioners on the initial hypotheses established by the FRCAW
3. obtain complementary information allowing the refinement of some hypotheses

This first survey was not intended to target a representative sample of professional participants so no descriptive analysis of the data thus collected has been attempted.

The questionnaire was made available in electronic format and participants were given the opportunity to respond using the on-line or the paper versions. Six replies were received, most likely because of the short response time allowed (one week to reply). Replies were anonymous. It is not possible to identify in detail what type of organisation the respondents belonged to. Nevertheless, given the responses obtained in the supplementary sections (containing questions directed specifically to shelters and societies and/or to pounds), it is possible to note that two respondents worked for a shelter or society while the other four worked in organisations operating as both pounds and shelters.

1.1.3.3. Hypotheses established by the FRCAW's network of scientific and technical experts

To address the question of the consequences of abandonment for the welfare of dogs and cats, six scientific and technical experts identified by the FRCAW were also called upon. They were asked to provide hypotheses on these consequences using a Klaxoon board grid. Once these individual proposals had been elicited, half a day of discussions took place which allowed the exchange of views on the various hypotheses proposed and their further development.

Starting from the principle that the consequences of abandonment will vary according to the situation in which the animal finds itself, the Klaxoon grid was divided into sections. These sections corresponded to the different types of abandonment identified using the information sources listed above. The individual experts were each asked to write a post-it note for each hypothesis they had identified and to then place the hypothesis in the appropriate section from the following list:

1. stray animal
2. animal left in front of a shelter
3. animal surrendered to a shelter with a declaration of abandonment
4. animal returned to a shelter following adoption
5. animal removed from a household due to abuse
6. other – any animal status not included in the other categories
7. consequences common to all types of abandonment: so that shared consequences could be included in all the above categories
8. other matters for attention to be taken into account: to incorporate other ideas that did not fit the above categories.

To guide the discussion, each post-it note could be assigned a colour and a category.

The three available colours of post-it notes were:

1. green for positive consequences
2. red for negative consequences
3. yellow for consequences that were neither positive nor negative.

The five available categories of animal-welfare impacts were:

- food
- housing
- health
- behaviour
- human-animal relationships

For each hypothesis formulated, the experts were also asked to provide bibliographical information.

1.2. Definitions[4] of abandonment

In order to characterise the abandonment of dogs and cats in both qualitative and quantitative terms, it must first be defined. The FRCAW found that several different definitions of the concept of abandonment were in existence, depending on how the subject was approached. Participating practitioners were then questioned on its definition so that their definitions could be cross-referenced with those found in the literature.

[4] 'Definition' is understood to mean an elucidation of the concept and of the animals concerned

1.2.1. Definition based on the interests of public health in the French Rural Code

In the French Rural Code (CRPM) **animals deemed to be abandoned are companion animals found roaming, brought into a pound and not reclaimed by their owners within 8 working days.**

This definition of abandonment thus considers only animals found roaming. To add clarity, Article L211-23 defines animals found roaming as follows:

- For dogs: '*Any dog that, beyond the activities of hunting, guarding, or protection of herds and flocks, is no longer being effectively monitored by its master and finds itself beyond earshot of the voice of its owner or of any whistle or similar sound-producing instrument that would allow it to be called back, or which has moved **more than 100 metres** away from its owner or the responsible person, is deemed to be roaming. Any abandoned dog left to its own devices is roaming, except if it is participating in an act of hunting and if it is demonstrated that its owner has engaged in every possible step to find it and retrieve it, including after the act of hunting is over.'*
- For cats: '*Any **unidentified cat found more than 200 metres** from dwellings or any **cat found more than 1000 metres from its master's home** and which is not under the direct supervision of the latter, as well as any cat whose owner is unknown and which is collected from the public highway or on the property of another, is deemed to be roaming.'*

Article L211-25 requires that, in the case of identified animals:
*'I. When a dog or a cat admitted to the pound is identified in accordance with Article L212-19 or by means of a collar displaying the name and address of its master, the pound's manager will seek out, as soon as is possible, the owner of the animal . […] **Following a period of 8 clear working days, if the animal has not been reclaimed by its owner, it is deemed to be abandoned** and becomes the property of the pound's manager, who can dispose of it according to the conditions set out hereinafter.*
II. In those départements *that are free of rabies, the pound's manager can keep the animals within the bounds of the pound's available space. Following the giving of an opinion by a veterinarian, the manager can transfer the animals free of charge to foundations or societies for the protection of animals that have a shelter available or to the societies indicated in Article L214-6-5, who, alone, are qualified to put forward animals for adoption by a new owner. […]'*

For unidentified animals, Article L211-26 stipulates:
'*In those départements that are free of rabies, when dogs and cats housed in the pound are not identified, the animals are kept for a period of eight clear working days […]. **If, following this period, the animal has not been reclaimed by its owner, it is deemed to have been abandoned** and becomes the property of the pound's manager, who can dispose of it under the same conditions as those mentioned in Article 211-25 II.'*

This definition of abandoned animals is based on a concern for the protection of public health and of citizens (essentially against rabies) and is focused neither on the animal nor on its state of welfare.

1.2.2. Concept listed among acts of cruelty in legal texts

According to the website of the French Ministry of Agriculture and Food, abandonment is legally defined as '**the act of leaving a companion animal without care, without the possibility of feeding itself or drinking**'. (La lutte contre l'abandon des animaux de compagnie | Ministère de l'Agriculture et de l'Alimentation). Although the source of this definition is not quoted, it is probably taken from case law. Indeed, convictions for abandonment follow the lines of this definition. We can note that, according to Article 521-1 of the French Penal Code, the act of abandonment is punishable by a fine of 45,000€ and three years' imprisonment, putting it on a par with serious brutality or acts of cruelty towards animals.

Unlike the definition of abandonment found in the French Rural Code, this definition focuses far more on the needs of the animal and on the account to be taken of its welfare. Nevertheless, if this definition is taken as the reference, the act of deliberately parting from one's animal by handing it over to a shelter is not deemed to be an act of abandonment.

1.2.3. The categories of abandoned animals identified by I-CAD

From an operation point of view, the number of abandonments can be calculated using the figures provided by I-CAD. An animal is thus considered to be abandoned once it is held in a pound before being transferred to a shelter, or when it is relinquished directly to a shelter (without passing via the pound).

Looking at the I-CAD data, 5 categories of abandoned animals can be distinguished for their contribution the total number of abandonments:

1. **Animals identified by a pound or shelter (**other than free cats[5]), that is, unidentified animals collected by a pound or a shelter which then immediately undergo the identification procedure;
2. **Identified animals surrendered to a shelter** (surrendered by an individual to a shelter) often described as 'clean' abandonments;
3. **Identified unclaimed animals admitted to a pound that have been transferred to a shelter,** that is, identified animals collected by a pound;
4. **Identified animals that have been admitted to a pound and died there**;
5. **Identified animals that have been brought dead to a pound.**

[5] A free cat is a cat that has been identified and sterilised but has no owner and lives in the wild. Its identification has been carried out by a moral person who performs or finances its care (most often an animal protection society). Free cats are therefore not included in the figures for companion animals once they have been identified and sterilised. Free cats should be distinguished from stray cats that have been neither identified nor sterilised.

Animals deemed to be abandoned according to the figures supplied by I-CAD are thus both those deemed to be abandoned in the sense of the Rural Code and those considered to be abandoned in case law. This operational definition nevertheless also includes lost or stray animals, as well as 'forced' abandonments that have supposedly been carried out in the interests of the animal, all of which can lead to overestimates.

Figure 1 shows the different categories of abandoned animals in the I-CAD data (in blue) and the types of animals included (cf. 2). For each category, animals considered to be abandoned by the Rural Code are shown in red and those considered to be abandoned by case law are shown in purple. This diagram highlights the differences in the types of animals deemed to be abandoned from the different points of view.

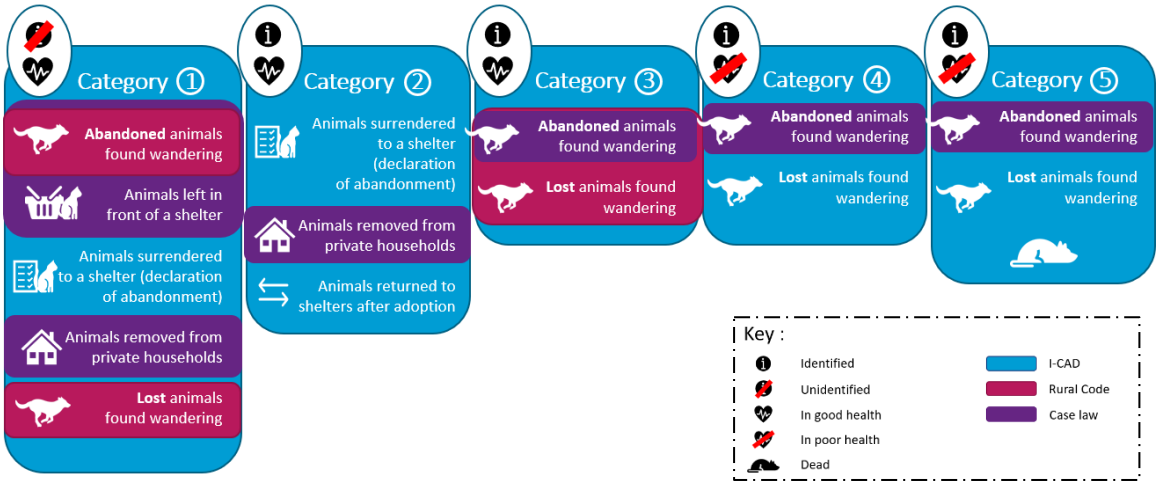


Figure 1. Diagram of the various categories of abandoned animals according to I-CAD figures classified according to the different current definitions of abandonment (Author: FRCAW)

1.2.4. The views of practitioners on the concept of abandonment

The issue of the definition of abandonment was the first to be addressed in the questions asked of the six questionnaire respondents. They were first asked if they 'agreed', 'somewhat agreed', 'somewhat disagreed' or 'disagreed' with the following suggested definitions:

1. 'Abandonment refers to the fact that an animal held by a pound has not been reclaimed by its owner and has therefore been relinquished to a shelter.' Rural Code definition
2. 'Abandonment refers to the act of leaving one's companion animal in front of a shelter.'
3. 'Abandonment refers to the act of surrendering one's animal to a shelter accompanied by a declaration of abandonment.'
4. 'Abandonment refers to the act deserting, neglecting or choosing to forsake one's companion animal.'

5. 'Abandonment refers to the act of leaving of a companion animal without care, without the possibility of eating or drinking.' Legal definition.
6. 'Abandonment refers to the act of allowing one's companion animal to roam on the public highway.'

Given the very low number of respondents, it is not possible to know which of these definitions is that most universally agreed with by practitioners. However, it is interesting to note that, despite the similar profiles of all respondents, agreement was not unanimous for any one of the definitions [6].

A follow-up question asked the six managers of shelters and/or pounds for their own definitions of abandonment. Two concepts that were absent from the above definitions were present in almost all definitions received. They have been synthesised by the FRCAW as follows:

1. The concept of intention, that is, the deliberate nature of the act of abandonment by the owner of the animal.
2. The concept of an abrogation of responsibility, that is, the fact that the animal's owner renounces, through this act, the commitment he or she had originally made towards his/her animal.

Recommendation 1:
As abandonment is a complex and multifactorial subject, it appears necessary for the continued work of the OCAD to establish a precise definition of the term 'abandonment' and of the categories of animals it includes. Indeed, estimates of the number of abandonments in France vary according to the definitions on which they are founded. The FRCAW urges that this task should be conducted with the collaboration of relevant practitioners by collecting information from a large number of actors (managers and staff in shelters and pounds) on their understanding of abandonment. Last, the FRCAW considers it to be essential that consideration for animal welfare should be a core element of the definition of abandonment.

1.3. Canine and feline populations in France

1.3.1. Total estimated populations of dogs and cats in France

According to figures produced by the FACCO[7] (2021), 50.5% of French households owned a domestic animal in 2020. This trend has been rising since 2014. The FACCO notes, in particular, a 6.6% increase in the number of companion cats, and a 0.1% reduction in the number of companion dogs from 2018 to 2020.

[6] A definition was considered to be unanimously agreed if all respondents ticked the 'agree' box.
[7] Fédération des Fabricants d'Aliments pour Chiens, Chats, Oiseaux, et autres animaux familiers Federation of flood producers for dogs, cats, birds and other companion animals

Estimates of the number of cats and dogs in France in 2020 differ depending on which of the two available sources (data published in 2021 by FACCO or I-CAD) is used (Table 1). Given the impossibility of arriving at a comprehensive estimate of the number of dogs and cats in France, the different results in Table 1, which amount to several millions for both dogs and cats, can be attributed to the different methodologies employed in the calculation of each of these populations in the two databases, which not only target different domestic carnivore populations as their starting points, but also use different data correction methods when attempting to estimate the total populations of dogs and cats in France.

Table 1. Estimates of the French populations of dogs and cats in 2020 from the FACC and I-CAD databases

Estimate produced by	Estimate of the French cat population (in millions of animals)	Estimate of the French dog population (in millions of animals)
FACCO	15.1	7.5
I-CAD	12.6	10.3

In terms of methodology, the FACCO estimates the French canine and feline populations on the basis of a survey carried out by the Kantar consultancy and advisory service[8] covering 140,000 representative French households. The response rate is around 80%. The results are then adjusted using INSEE data[9] characterising the French population. It should be noted that this survey excludes households in the French overseas territories. This FACCO estimate thus excludes animals in breeding establishments or in shelters.

I-CAD estimates the French canine and feline populations on the basis of identified animals assumed to be alive that are registered in the national identification database for domestic carnivores. The population of identified animals assumed to be alive is the population of identified animals minus the number of animals declared dead and the number of animals assumed to be dead (animals over 13 years of age[10]). This figure for identified animals assumed to be alive is then divided by the percentage of identified dogs calculated by the FACCO (92%) in order to obtain the canine population in France, and by the percentage of identified cats calculated by the FACCO (53%) in order to obtain the feline population in France.

Considerable uncertainty thus remains over the total populations of dogs and cats in France, in particular for cats, whose identification figures remain low. We can venture a number of hypotheses to account for the differences in these estimates in addition to the low identification rates for cats. In particular, I-CAD's systematic approach makes it possible to take the whole canine and feline populations in France into account and not just the companion animal populations. However, this approach is strongly dependent on the estimated figure for identified

[8] https://www.kantar.com/fr/a-propos-de-kantar
[9] Institut National de la Statistique et des Etudes Economiques
[10] 13,4 ans pour les chats et 13,6 ans pour les chiens 13.4 years for cats and 13.6 years for dogs.

animals assumed to be alive, and therefore presents an uncertainty for cats in particular, given that 13 years may appear low for the assigned age at death.

Recommendation 2:
In order to analyse the data collected by OCAD, it is essential to refine these estimates so that a reference population can be established for the task. The estimates should be accompanied by confidence ranges and margins of error should be indicated. The FRCAW therefore encourages the FACCO, Kantar and I-CAD to continue current discussions within their joint working group to achieve this end.

1.3.2. Populations of identified dogs and cats in France

Since January 2012, **the identification of companion dogs and cats has been obligatory** for all cats over 7 months old and for all dogs over four months old in France. Indeed, Article L212-10 of the Rural Code (CRPM) states: *'Dogs and cats, before ownership is transferred, whether for pecuniary gain or free of charge, must be identified using a procedure approved by the Minister for Agriculture and carried out by persons qualified to this purpose. The same applies, independently of any transfer of responsibility, to dogs born after 6 January 1999 aged over four months and to cats over seven months born after 1 January 2012. The identification procedure is performed at the cost of the relinquishing party.*
In départements *where rabies is officially declared to be present, identification is obligatory for all domestic carnivores.'*

The national identification database for domestic carnivores gives the following figures for the populations of living and identified cats and dogs in 2020: **16,186,818 animals**, comprised of **9,500,004 dogs** and **6,686,814 cats** (source: I-CAD). It should be remembered that any cat over 13.4 years old and any dog over 13.6 years old is deemed to be dead by I-CAD.

In particular, the number of new annual identifications of cats has risen strongly since 2014 (a 86% rise for cats compared with a 4% rise for dogs) (Figure 2).

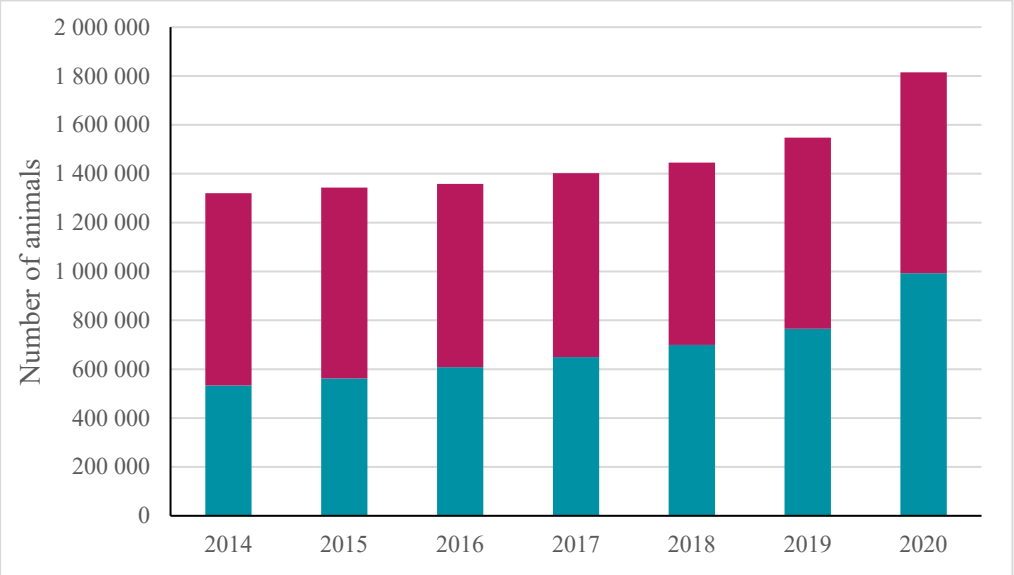


Figure 2. Changes in the numbers of registered identifications for the years 2014-2020 (dogs – red, cats – blue-green).

It is important to note that, according to I-CAD, the age at which cats underwent identification remained roughly the same year on year. This suggests that the growth in numbers of identified cats can mostly be attributed to the fact that new cat owners are increasingly having their cats identified, rather than that longstanding owners of cats are deciding to register them later in life.

2. Mapping the patterns of abandonment

In 2021, a total of 206,907 abandonments can be calculated, comprising 147,547 cat abandonments and 59,360 dog abandonments, according to I-CAD's figures.

This figure has remained relatively constant year on year since 2016 (Table 2).

Table 2. Changes in the numbers of dog and cat abandonments since 2016 (Author: FRCAW based on I-CAD data)

	2016	2017	2018	2019	2020	2021
Cats	123,242	111,743	123,172	131,165	137,034	147,547
Dogs	73,059	71,328	69,774	70,077	60,257	59,360
Total	**196,301**	**183,071**	**192,946**	**201,242**	**197,291**	**206,907**

To calculate the number of abandoned animals, five categories of animal are added together based on their I-CAD identification status and ownership transfer patterns (Figure 3).

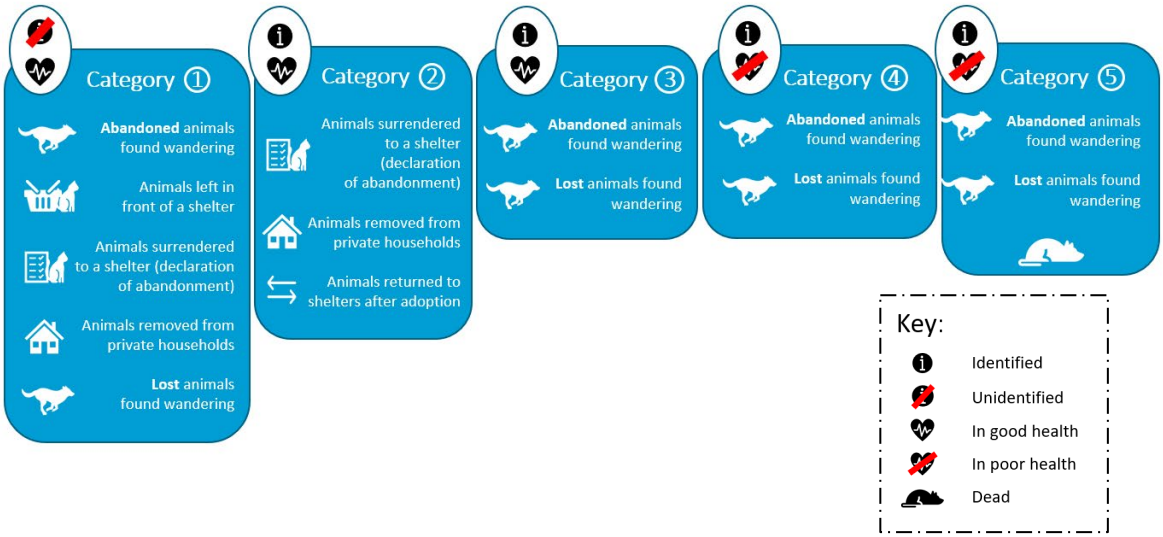


Figure 3. Diagram showing details of all categories of abandoned animals in the I-CAD database (Author FRCAW)

2.1. Categories of abandoned animals

2.1.1. Category 1: animals identified by shelters and pounds

This first category is made up of all animals for whom the identification procedure is carried out by shelters and pounds. In other words, it is made up of all previously unidentified animals left at shelters or collected by pounds. This category represents more than 80% of registered abandonments in a given year.

There are several types of abandonment in this category:

- the abandonment of unidentified animals on the roadside;
- the leaving of unidentified animals in front of shelters;
- direct abandonment of unidentified animals at shelters, that is when owners surrender their companion animals to a shelter, signing a declaration of abandonment;
- seizures of unidentified animals from private households;
- lost animals whose owners cannot be traced because the animals are not identified.

The animals in this category are young, with a median age of around one year for both dogs and cats (1.23 years for cats and 1.02 years for dogs in 2020). This can be explained in particular by the fact that abandoned young animals will necessarily fall into Category 1 because the requirement for the identification of animals applies only to dogs over 4 months of age and cats over seven months.

Whereas the number of abandoned dogs in this category fell slightly in 2016, the number of cats rose (Table 3). We can assume that the increase in this category of abandoned cats is linked to the general rise in the cat population in France.

Table 3. Changes in the numbers of dogs and cats registered under Category 1 between 2016 and 2020. (Author: FRCAW using I-CAD data)

	Species	2016	2017	2018	2019	2020	2021
Animals undergoing identification in shelters and pounds	**Cats (other than free cats[11])**	17,278	104,793	115,675	122,701	128,607	137,153
	Dogs	49,919	48,479	47,188	46,612	38,929	37,269

To calculate the number of 'abandoned' animals in this category, the number of cats designated as 'free' in the national identification database for domestic carnivores has been subtracted from the total number of identifications carried out in shelters and pounds. A free cat is a cat that has been both identified and sterilised but has no owner and lives in the wild. Its identification is associated with a moral person who provides/pays for its care (most often an animal protection society). These cats do not therefore belong to the population of companion animals because they are released to roam following their capture. Free cats differ from stray (including feral) cats as defined in this report, the latter being cats with no owners that live in the wild and are neither identified nor sterilised.

To better understand how free cats are recorded, questions were put to refuge managers on the criteria used to select free cats and on the frequency of their registration. Although the selection criteria for free cats were similar for all six respondents (lack of sociability, approaching and handling difficulties, inability to adapt to a confined environment), this was not the case for the frequency with which their release was recorded: one respondent of the four[12] who answered this question stated that s/he did not systematically register the release of free cats. It should be noted that, in cases where certain free cats are mis-recorded by shelters, they will then be counted in this first category of abandoned animals.

In light of the criteria for the selection of free cats described by shelter managers, we can assume that some stray cats[13] who exhibit little wildness are captured by pounds and shelters but are not treated as free cats. Such stray cats would therefore be included in the population for adoption and would not be released. As a consequence, the number of abandoned animals in this category would be overestimated, because some of the cats available for rehoming from shelters would in fact be stray cats[14] (without owners) rather than abandoned cats.

[11] A free cat is a cat that has been both identified and sterilised but has no owner and lives in the wild. Its identification is associated with a moral person who provides/pays for its care (most often an animal protection society).
[12] The other two gave no answer to this question.
[13] Stray cats as defined in this report are cats that have no owner and live in the wild. Unlike free cats, stray cats have not undergone identification or sterilisation.

Recommendation 3:
To improve estimates of the proportion of stray cats in the total French cat population and thereby gain a clearer picture of their contribution to population pressures on shelters, a survey of stray cats would be appropriate. It would also be of interest to identify the proportion of cats in Category 1 whose identification and sterilisation is the result of campaigns by shelters and municipalities, so that the proportion of cats who might have been strays but have instead become part of the population available for adoption can be ascertained.
Last, to succeed in the above, the selection criteria for free cats used by different shelters and societies must be standardised on an objective basis to avoid disparities being introduced into the abandonment figures by this process.

2.1.2. Category 2: Animals whose ownership has been transferred from an individual to a shelter

This second category of abandoned animals is comprised of identified animals who have owners and who are directly relinquished to a shelter. It represents an average of around 8% of registered abandonments.

There are several types of abandonment in this category:

- Direct abandonments of identified animals, that is, when owners surrender their companion animals to a shelter and sign a declaration of abandonment;
- Seizures of animals from private households;
- Abandonments following adoption from a shelter, that is to say, when an adoption does not go well and the owners return the adopted animal to the shelter.

The abandonments identified in this category can also be forced abandonments, carried out in the interest of the animal when the owner can no longer meet its needs.

The animals in this category are older than in the previous one, their median age being around 3-4 years for both dogs and cats (3.93 for cats and 3.44 for dogs in 2020).

Unlike the previous category, there are far fewer abandoned cats than dogs in this category. The number of abandoned cats in this category has been rising over the past five years (associated, in particular, with the increase in cat identifications) while the number of abandoned dogs appears stable (Table 4).

Table 4. Changes in the numbers of dogs and cats registered under Category 2 between 2016 and 2021 (Author: FRCAW, based on I-CAD data)

	Species	2016	2017	2018	2019	2020	2021
Animals surrendered by their owners to shelters	**Cats**	3,767	4,026	4,039	4,504	4,577	5,536
	Dogs	13,106	12,205	11,393	12,108	11,240	12,134

It is not currently possible to calculate the number of abandonments following an adoption from a shelter because in some cases where an animal is rehomed by a shelter, ownership of the animal is not immediately transferred to the adopter. This allows the shelter to monitor how the rehomed animal settles in and to avoid a further change of ownership if it is subsequently returned to the shelter. Additionally, it is not possible to complete a change of ownership in the I-CAD database without a veterinary certificate which must be issued three months after the animal's arrival at the shelter, including the day of arrival, and delivered to the shelter or society responsible for the animal's adoption.

Recommendation 4:
To improve calculation of the different types of abandonment, it would be desirable for shelters and societies to make an entry in the OCAD database when an animal is rehomed or when the animal is returned to the shelter.

The advantage of the types of abandonment in this category is that they allow shelters to access key information on an animal and the reasons for its abandonment.

Recommendation 5:
Further discussions with shelters and societies are needed to identify the full range of information collected in these instances and thus determine which data can usefully be analysed to gain a better understanding of the motivators for abandonment and reduce its impact.
Following such discussions, the data identified as being relevant to the analysis should be included in the OCAD's database so that patterns can be tracked.

2.1.3. Category 3: Privately-owned animals who have been admitted to a pound or transferred to a shelter

The third category of abandoned animals whose numbers can be estimated using the I-CAD database is made up of identified animals who have been admitted to a pound and have not been collected by their owners. On average they represent around 6% of registered abandonments.

There are several types of abandonment in this category:

- Lost animals whose owners cannot be contacted by the pound following a failure to update contact details in the I-CAD database;

- Abandonments of identified animals on the roadside where owners are not willing to respond to an approach from the pound, or who express themselves to be unwilling to collect their animal.

The median age of this category of animal is around 4-5 years of age for both cats and dogs (5.62 for cats and 4.34 for dogs in 2020).

As for Category 2, there are fewer abandoned cats than dogs in Category 3. This is probably linked to the lower proportion of identified cats compared with dogs, meaning that, when abandoned, they are more likely to be included in Category 1. The patterns of abandonment for dogs and cats are similar to those for Category 2, probably for the same reasons (Table 5).

Table 5. Changes in the numbers of dogs and cats registered under Category 3 between 2016 and 2021

	Species	2016	2017	2018	2019	2020	2021
Identified animals with owners entering pounds and transferred to shelters	**Cats**	1,283	1,585	1,839	2,072	1,973	2,426
	Dogs	9,326	9,398	9,902	10,119	9,071	8,997

According to I-CAD, a non-negligeable number of abandonments are associated with failures to register changes in contact details in the national identity database for domestic carnivores.

To provide further details on this matter, a number of questions were included on the practitioner questionnaire on the contacting of owners by pounds and pound-shelters.

With regard to the method of contact with owners, the four pound-shelter managers were in agreement that telephone calls and social networks are the preferred contact methods because of their speed and the receptiveness they invite in owners[15]. Nevertheless, these same respondents also use standard mail, registered mail, and may even sometimes visit the owner's home.

The respondents said that contact is made with owners in over 75% of cases. The reasons that might lead a pound to fail to contact the owner of an animal are as follows:

- Unreadable identification
- Incorrect details
- Details not updated
- Owner not found on social media

Recommendation 6:
To be able to quantify abandonments involving failures to update the owner's details, it is necessary to know how many owners could not be contacted. It would therefore be desirable for pounds to include this figure in the OCAD's database.

[15] It should be remembered that the sample of professional respondents is not representative, meaning that the information provided can only be indicative.

2.1.4. Category 4: Identified animals with owners, admitted to a pound and dying on the premises

The fourth category of abandoned animals identified using the I-CAD database is that of identified animals who have arrived at the pound and then die on the premises. It represents on average around 0.5% of registered abandonments.

Like the previous category, this category can include both abandoned animals and lost animals not found by their owners, and the animals can already be ill or wounded on their arrival at the pound. This category includes far fewer animals than the previous ones (Table 6).

Table 6. Changes in the number of dogs and cats registered under Category 4 between 2016 and 2021.

	Species	2016[16]	2017	2018	2019	2020	2021
Identified animals with owners entering pounds and dying on the premises	**Cats**	41	253	281	352	270	325
	Dogs	90	507	593	524	447	418

The median age of these animals is 9.78 years for cats and 4.33 years for dogs. Currently, the FRCAW is unable to identify any factor that would explain this difference in median age between dogs and cats.

Recommendation 7:
To obtain an accurate record of the number of animals that are actually abandoned, it would be desirable for pounds to record in the OCAD's database whether the owner has been contacted and, if so, whether the animal had been lost.
To arrive at a more detailed picture of the consequences of abandonment, it would also be appropriate to include in the OCAD database the cause of the animal's death as identified by the veterinarian, when known.
I-CAD proposes, in particular, use of the following list of reasons for death:

- Natural death following an undiagnosed illness, following a diagnosed illness, following injuries (accident)
- Euthanasia required for medical reasons, for other reasons, details to be provided (eg. behavioural)

This list of reasons provides a starting point to be expanded on receipt of more information from practitioners.

[16] For Categories 4 and 5, the figures were lower in 2016 than in subsequent years because the I-CAD website changed its recording protocols at the end of 2016. Indeed, I-CAD explains that, until this change was made, pounds were not considered to be keepers of animals. Deaths in pounds were therefore only included in the figures if a deliberate choice was made to record them.

2.1.5. Category 5: identified animals with owners, arriving dead at the pound

This fifth category is very similar to the previous one, except that the identified animals are deceased before they arrive at the pound. It represents on average 1% of registered abandonments.

It is interesting to note that the number of cats recorded in this category is considerably higher than that in the previous category (Table 7). This could be linked to road accidents where companion cats are victims. Here again, it can be assumed that the increase in the number of recorded cats is related to the rise in identified cat numbers.

Table 7. Changes in the numbers of dogs and cats registered under Category 5 between 2016 and 2021 (Author : FRCAW based on I-CAD data)

	Species	2016[17]	2017	2018	2019	2020	2021
Identified animals with owners arriving dead at pounds	**Cats**	873	1,086	1,338	1,536	1,607	2,107
	Dogs	618	739	698	714	570	542

The median age of these animals is 3.35 years for cats, supporting the road accident hypothesis, and 6.39 for dogs.

Recommendation 8:
Although this category represents a very small proportion (1%) of total abandonments, if the cause of death of the animals collected by the pounds were to be registered in the OCAD database this would allow animals who were victims of accidents to be removed from the abandoned animal statistics.

[17] For Categories 4 and 5, the figures were lower in 2016 than in subsequent years because the I-CAD website changed its recording protocols at the end of 2016. Indeed, I-CAD explains that until this change was made, pounds were not considered to be keepers of animals. Deaths in in pounds were therefore only included in the figures if a deliberate choice was made to record them.

2.1.6. Overview of all abandoned animals recorded in the I-CAD database

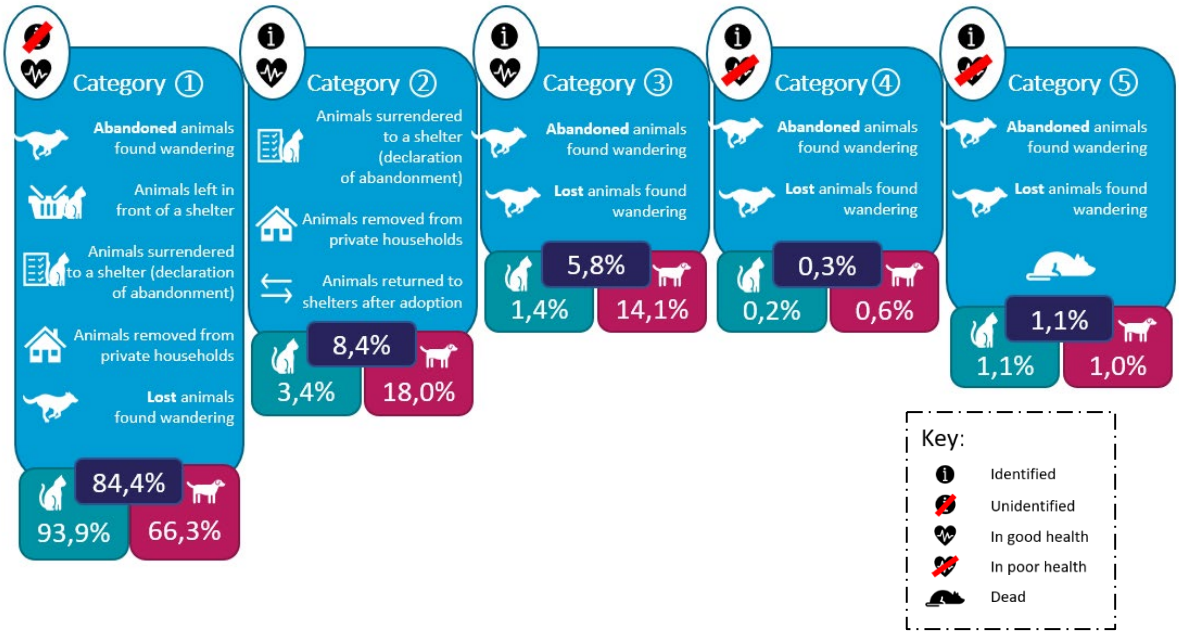


Figure 4. Overview of all categories of abandoned animals recorded in the I-CAD database. For each category, the average is shown (in %) of abandoned animals in 2016-2021 for that category in relation to the total number of recorded abandoned animals (blue= total animals (dogs + cats); blue-green = cats; red = dogs) (Author FRCAW, based on I-CAD data)

2.1.7. Unknown abandoned animals – not included in the abandonment figures

Some animals can be considered to be abandoned but not be included in the abandonment figures because their identification status does not allow them to be recorded as such:
Among these animals, the FRCAW identifies the following cases :

- Animals surrendered to the care of a third person and never collected by their original owners;
- Unidentified animals who arrive at the pound in poor condition and then die in the pound;
- Unidentified animals found dead by pounds;
- Identified or unidentified animals who are never collected by pounds, that is, animals who have been either killed or deserted by their owners.

Recommendation 9:
It would be possible for some of the animals in the above cases to be included in the total number of abandoned animals, for instance where the OCAD database includes details of the dates of death for identified animals or animals dying somewhere other than in the pound.

2.2. Mapping abandonments using data flows for animals in different categories

The fates of different categories of abandoned animals can be mapped through separate animal data flows. Depending on the health or identification status of the animals, their pathways will vary (Figure 5).

Given the complexity of the interdependencies between the different statuses, Figure 5 makes no claim to map all the categories referred to above in a comprehensive way.

Recommendation 10 – Evaluation of the categories used for abandoned animals
Some animals are currently considered to be abandoned on the basis of their identification status and of the registered data flows relating to them, despite being simply lost (and not found) or straying. This is partly due to the fact that the census of abandoned animals is currently based on identification status. It would therefore appear imperative for OCAD to establish its own database so the incidence of abandonments can be calculated in a more precise way (without focusing solely on identification status) and in accordance with a definition to be approved by the entire steering committee.

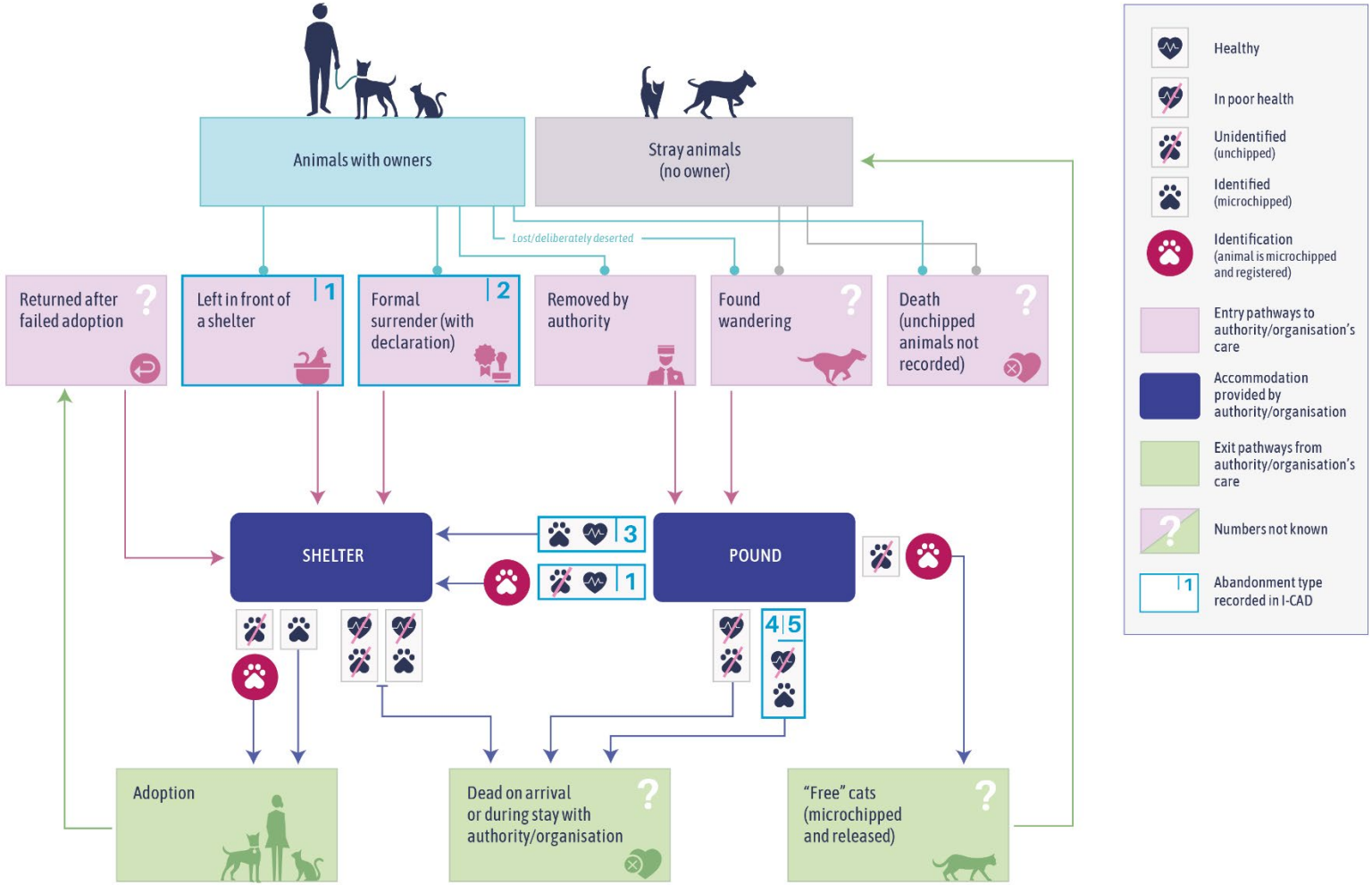


Figure 5. Diagram of abandonment pathways (Author: FRCAW)

3. Hypotheses concerning the causes of and risk factors for abandonment

Suite aux retours des acteurs sollicités (I-CAD et six responsables de refuges et fourrières), le CNR BEA propose des hypothèses sur les motifs d'abandon. Dans un premier temps, ces motifs sont recensés, puis dans un deuxième temps, les hypothèses qui ont pu être testées par l'analyse des données fournies par I-CAD sont développées.

Following the responses to requests for information (from I-CAD and six shelter and pound managers), the FRCAW was able to produce hypotheses on the motivators for abandonment. The motivators were collated, and then those hypotheses that could be tested via the analysis of I-CAD's data were further developed.

Attention is drawn to the fact that the results of the survey of practitioners carried out by the FRCAW are based on the answers of six respondents, of whom two work in a shelter or society, and the other four work for an entity that operates as both a pound and a shelter. Given that the sample of respondents is not representative of the practitioners to whom the request was made, the theories proffered in the following section are described on an indicative basis and the information gathered cannot pretend to be comprehensive.

3.1. Hypotheses on the nature of motivators for abandonment

There are many reasons why an owner may abandon a companion animal. These may relate to changes in the owner's circumstances, in the animal itself (the owner finds it harder to control), or to other factors. Some motivators are interdependent.

3.1.1. Motivators related to the owner's circumstances

According to the practitioners surveyed, it is not rare for dog and cat owners to abandon a pet following life changes, be they large or small. These abandonments can be carried out reluctantly, for lack of a better option. Of those related to a change in the owner's situation, the following reasons/motivators were cited by respondents:

- Death
- Job move and/or house move
- Going on holiday
- Divorce
- Eviction
- Inability to conform to legal requirements for owners of categorised or biting dogs
- Imprisonment
- Lack of financial means
- Birth of a child

- Medical problem (allergy, incapacity, entry to a retirement home, hospitalisation).

3.1.2. Motivators related to the animal

The motivators related to the animal encountered by respondents are as follows:

- Sick animal
- Animal is too old
- Animal is too expensive
- Animal doesn't get on with the other animals in the household
- Animal has a 'behavioural problem', such as excessive barking, aggressiveness (towards humans or other animals), destructiveness, running away, dirtiness, biting and nervousness.

3.1.3. Other motivators

With regard to possible causes of abandonment that are not inherent to the owner's situation or to the animal itself, respondents list unwanted litters (for cats in particular), lack of awareness-raising among owners on an animal's needs, impulse acquisitions, underestimation of the adult size of the animal (for dogs), lack of consideration for the animal (perceived as a portable possession that can be discarded), owners wrongly informed by transmission of erroneous information. On this last point, although it is correct that cats are a breeding ground for Toxoplasma gondii and can be a source of contamination, particularly for pregnant women, they are not the most common source of infection, this being food contamination. Further, it is easy to prevent contamination from cats (by glove-wearing when cleaning the litter tray and cleaning the litter tray at least once a day, given that oocytes are not infectious for at least 24 hours) (Elmore et al., 2010). However, the frequent belief that cats are key vectors can be a motivator for abandonment when pregnancy occurs. If abandonment can be prevented, this will in any case help to reduce environmental contamination by *T. gondii*, as it will stop the animal from soiling the environment through uncontrolled defecation and avoid its infection by rodents and birds acting as intermediate hosts (Torrey et al., 2013).

3.1.4. Overview of motivators

Of all the motivators cited above, respondents were asked to choose the five most frequent motivators for abandonment in their professional opinion. A score was assigned to each motivator based on the total number of mentions it received from respondents.

For cats, the main (highest scoring) motivators for abandonment according to the respondents were:

1. Behavioural problems (5 mentions)
2. Allergies and unwanted litters (3 mentions)
3. Moving house and birth of children (2 mentions)

4. Deaths, lack of financial means and impulse acquisitions (1 mention).

For dogs, the main (highest scoring) motivators for abandonment according to the respondents were:

1. Behavioural problems (6 mentions)
2. Lack of information held by the owners, impulse acquisitions, divorce, births and moving house (2 mentions)
3. Deaths, lack of financial means and medical problems (1 mention).

Figure 6 provides an overview of all motivators mentioned.

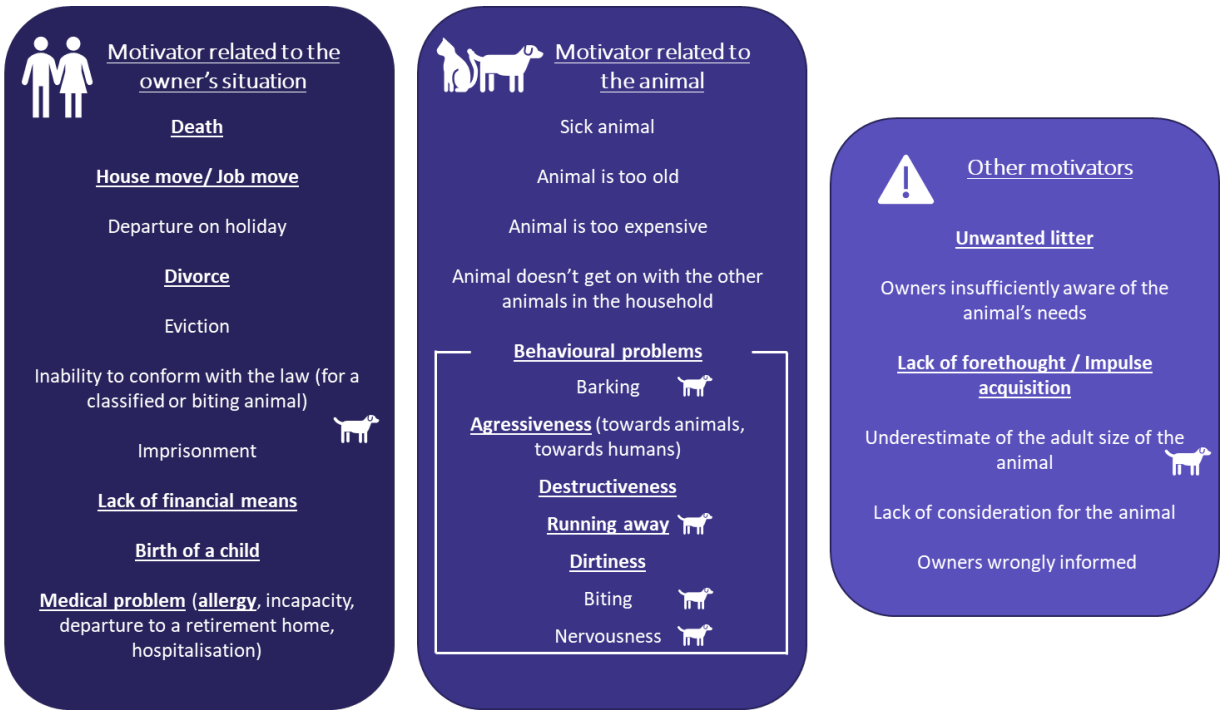


Figure 6. Overview of potential motivators for abandonment mentioned by practitioners approached by the FRCAW. Bold underlined = motivators judged to be the most frequently involved by those shelter and pound managers whose opinions were sought. Dog icons indicate motivators mentioned only for dogs. (Author: FRCAW)

Recommendation 11:
To establish more precisely the main causes of and risk factors for abandonment, it would be desirable for shelters to indicate the motivator for abandonment (where known) for inclusion in the OCAD database. If the question on the motivator for abandonment is asked using a multiple-choice format, the FRCAW recommends that all of the motivators cited in this report should be included in the choice of replies.

3.2. Analysis of particular hypotheses concerning motivators for abandonment, based on the I-CAD data

3.2.1. Unwanted litters as a motivator for cat abandonment

As mentioned above, the shelter and pound managers who responded to the survey were of the professional opinion that unwanted litters are one of the main causes for abandonment, especially for cats.

To test out this theory, patterns in the number of abandoned animals in Category 1 of the I-CAD database were analysed. It was found to indeed be the case that abandoned puppies and kittens are generally not identified when they arrive at a shelter (they are still too young) and are therefore counted in Category 1 of the I-CAD data because their identification is carried out by the pounds or shelters.

Given the exceptional nature of 2020 and 2021 in terms of identification statistics (because of the health crisis and months of lockdown), patterns for the years 2018 and 2019 were studied. We can note that there was a clear increase in the number of abandoned cats in this category from June onwards, followed by a reduction in abandonments from December (Figure 7). The number of abandoned dogs shows little change across the year. The patterns of cat abandonment across the year by period are similar in 2018 and 2019 and they match those for the number of kitten births. Indeed, female cats usually come into oestrus at the end of the winter and remain so until the autumn. As their gestation period is on average between 64 and 69 days, kitten births mostly occur from April to November, with a peak in births in April and May. The abandonment peak in June and July could thus be explained by the identification system for kittens born in April/May who are admitted to pounds or shelters and are then identified at around the time of weaning (at 2 or 3 months).

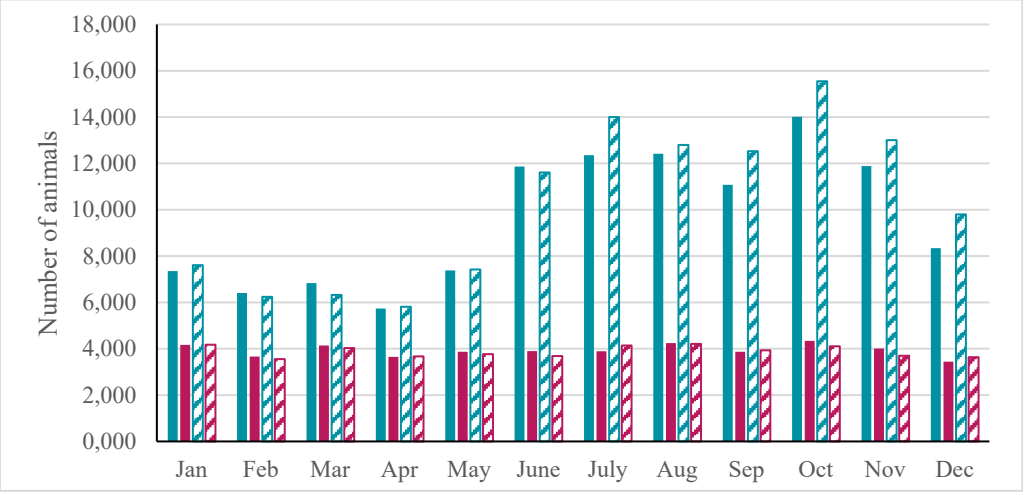


Figure 7. Patterns of Category 1 cat (blue-green) and dog (red) abandonments by month in 2018 (solid columns) and 2019 (hatched columns).

To test this hypothesis, variations in the median age for Category 1 abandoned animals were studied for the years 2018 and 2019 (Figure 8). Patterns for the median age of abandoned animals are more or less identical in 2018 and 2019. We can observe a substantial and sudden reduction in the age of abandoned cats, which shifts from over 1 year old in May to around two and a half months in June. The median age of abandoned cats then rises gradually between June and December, supporting the theory that the abandonment peak observed above is linked to litters of unwanted kittens.

For dogs, the median age of abandoned animals in this category remains at around 1 year old throughout the year (in both 2018 and 2019).

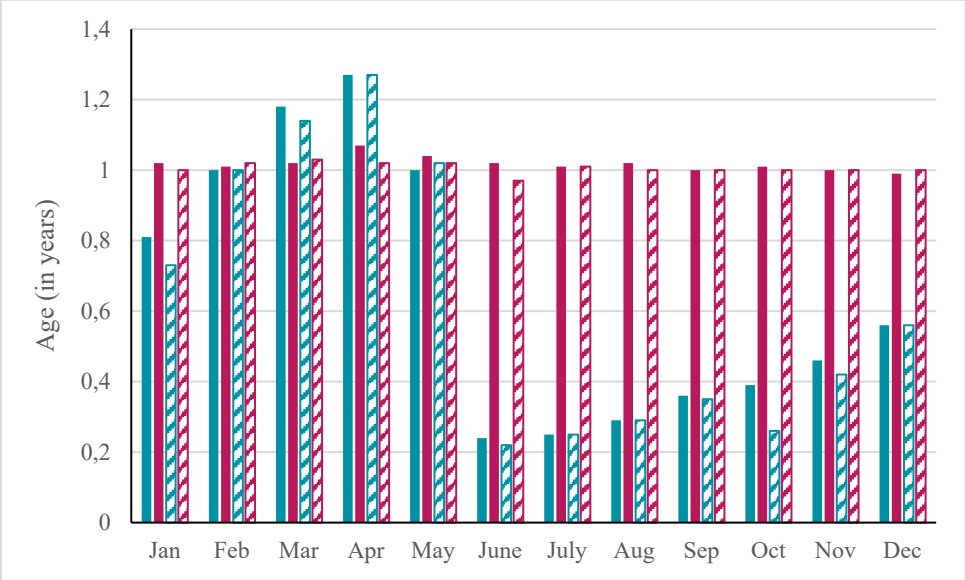


Figure 8. Changes in the median age[18] of Category 1 abandoned cats (blue-green) and dogs (red) by month in 2018 (solid columns) and 2019 (hatched columns). (Author: FRCAW based on I-CAD data).

On the basis of the data supplied by I-CAD, it would appear that the sharp peak in abandonments in the summer is related to unwanted litters of kittens.

Recommendation 12:
Given the short period available for the writing of this report, no statistical analysis could be carried out by the FRCAW to validate the theory that the June/July peak in abandonments is linked to the peak of kitten births in April/May. Statistical analysis of these data is therefore needed to confirm the observed trend.

[18] Age at the time of identification. It can therefore be a slight overestimate of age as very young animals are not immediately identified on arrival at the shelter.

3.2.2. Holidays away from home as a motivator for abandonment

Although the practitioners who were approached did not include departure on holiday as a major motivator for abandonment, in the public imagination, this nevertheless continues to be an important motivator for abandonment, linked in particular with a peak in abandonments during the summer.

To test this hypothesis, the patterns of abandonment throughout the year for Categories 1, 2 and 3 of the I-CAD data were analysed for the years 2018 and 2019. Categories 4 and 5 of the I-CAD data were not included in the analysis, given the very small number of animals in these categories compared with the first three.

For Category 1 (Figure 7), a very marked increase in the number of abandoned cats occurs during the summer, but this would appear to be due to kitten births rather than to holiday departures (cf 3.2.1). Indeed, were this increase linked to holiday departures, it could be assumed that it would be the same for dogs given that the arrangements required to look after both species are considerable. In fact, the number of dog abandonments in Category 1 remains stable at around 4,000 throughout the year (for 2018 and 2019). For Categories 2 and 3 of the I-CAD data (Figure 9), no increase in the number of abandonments is to be observed in the summer period (for both 2018 and 2019) and this applies to both cats and dogs.

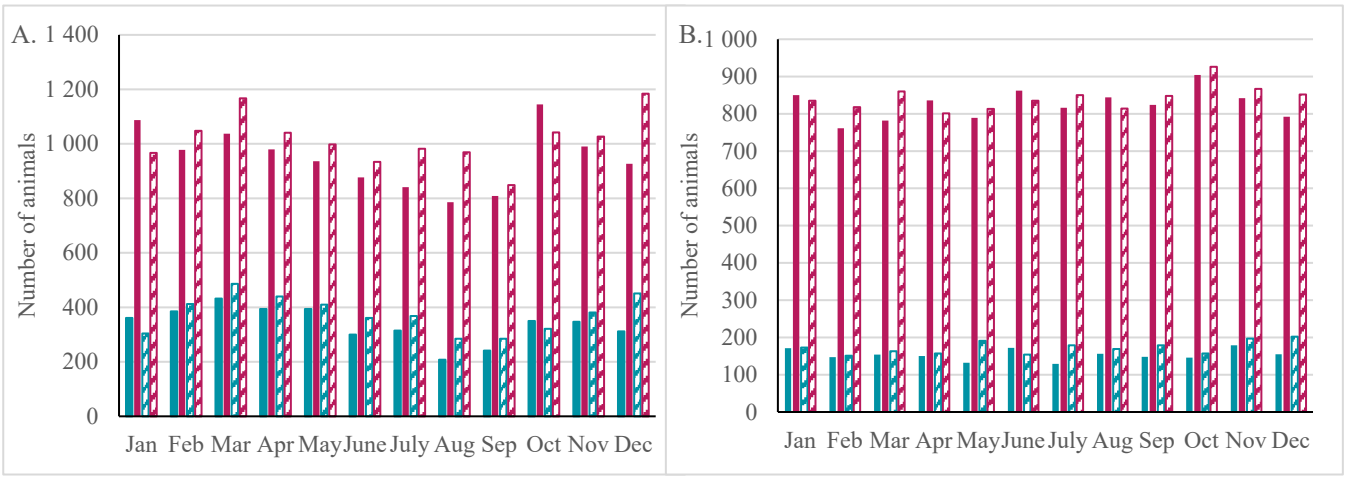


Figure 9. Abandonment patterns by month for animals (cats = blue-green, dogs = red) in Categories 2 (A) and 3 (B) for 2018 (solid columns) and 2019 (hatched columns)

The trends observed do thus not support the assertion that departure on holiday is an important motivator for abandonment.

Recommendation 13:
As for the previous instance, it was not possible for the FRCAW to carry out any statistical analysis to either prove or disprove the hypothesis that summer holiday departures are a major motivator for abandonment. It is therefore necessary, as a next step, for statistical analysis to be performed on these data to confirm the observed trends.

3.2.3. Sex of dogs and cats as a risk factor for abandonment

Managers of pounds and shelters were asked whether, based on their professional experience, they considered that the sex of an animal could be a risk factor in abandonment. Of five respondents, two replied that this factor had no effect, while three replied that more males are abandoned than females, citing certain 'behavioural problems' more commonly found in males, such as aggression and urinating to mark territory.

To test this hypothesis, the sex ratio of abandoned animals was compared in each of the I-CAD data categories to the sex ratio of the total population of identified animals for the years 2018 to 2021 (Table 8 and 9).

For cats, the sex ratio in the identified population was 0.9 (i.e., 52.5% females as against 47.5% males) for each year from 2018. For Categories 1 – 3, the sex ratio of abandoned animals appears to be roughly the same as that of the total population of identified animals, exceptions being Category 2 in 2019 and Category 3 in 2021, when more males were abandoned. In general, sex does not appear to be a risk factor for cat abandonment except, possibly, for cats in Categories 4 and 5 of the I-CAD data (animals found dead by pounds or dying in pounds) for whom the sex ratio between 2018 and 2021 was consistently above 1. This could be explained by the fact that male cats (and particularly uncastrated males) occupy a larger territory than females (Liberg et al., 2000), leading them to cover greater distances and, by this fact, to increase their risk of accidents.

For dogs, the sex ratio of the identified population was 1 (roughly a 50/50 split between females and males) in every year from 2018. For dogs in Category 1 of abandoned animals, the sex ratio was 1.2 in every year from 2018. In the other abandonment categories it was even higher for this species (between 1.6 and 1.8 for each year). The significance of these differences between the number of males and females in the abandoned population compared with the total annual identified population supports the hypothesis that male dogs are abandoned more than females.

Table 8. Populations and sex ratios for the abandonment of cats in each I-CAD data category between 2018 and 2021, compared with the sex ration of the total population of identified cats (Author : FRCAW based on I-CAD data).

		Identified animals		Category 1		Category 2		Category 3		Category 4		Category 5	
Year	Sex	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio
2018	F	3,244,136	0.90	59,862	0.90	2,026	0.99	769	0.91	127	1.21	562	1.36
	M	2,930,630		53,801		2,002		703		154		766	
2019	F	3,407,284	0.90	62,487	0.90	2,233	1.02	855	0,94	162	1.17	621	1.45
	M	3,082,244		56,193		2,268		807		190		899	
2020	F	3,571,008	0.91	65,434	0.91	2,559	0.91	863	0,94	133	1.03	1,001	1.19
	M	3,237,422		59,717		2,327		815		137		1,187	
2021	F	3,757,352	0.91	69,884	0.92	2,822	0.96	924	1,07	147	1.21	875	1.39
	M	3,431,199		64,031		2,706		988		178		1,216	

Table 9. Populations and sex-ratios for the abandonment of dogs in each I-CAD data category between 2018 and 2021, compared with the sex ratio of the total population of identified dogs (Author FRCAW based on I-CAD data)

		Identified animals		Category 1		Category 2		Category 3		Category 4		Category 5	
Year	Sex	Population (number of animals)	Sex ratio	Population (nombre of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio	Population (number of animals)	Sex ratio
2018	F	4,703,587	1.00	20,433	1.22*	4,424	1.57*	3,435	1.78*	192	2.09*	280	1.49*
	M	4,706,769		24,946		6,960		6,122		401		418	
2019	F	4,716,134	1.00	20,128	1.20*	4,632	1.61*	3,527	1.75*	154	2.40*	299	1.39*
	M	4,716,179		24,230		7,465		6,161		370		415	
2020	F	4,721,138	1.00	16,712	1.23*	4,051	1.71*	3,173	1.69*	166	1.69*	225	1.79*
	M	4,721,466		20,576		6,933		5,370		281		403	
2021	F	4,729,502	1.00	15,950	1.22*	4,610	1.63*	3,288	1.68*	143	1.92*	216	1.51*
	M	4,731,657		19,422		7,518		5,519		275		326	

** $p < 0.05$*

Based on the I-CAD data, the fact of being a male appears to be a possible abandonment risk factor for dogs, or at least an indicator of risk.

Recommendation 14:
According to the data for 2018 to 2021, male dogs are abandoned significantly more often than females. Sex could thus constitute a potential risk factor for dog abandonment, or at least a risk indicator. It is necessary to establish the cause of the higher abandonment rate of male dogs compared with females. In particular, it would be of interest to establish whether this incidence rate is linked to behavioural problems as the respondent practitioners believe. To this end, it is essential for OCAD to collect stated motivators for abandonment so it can be determined whether the sex of abandoned animals is a causal factor for abandonment or, if not, to identify the risk factor with which it is associated.

3.2.4. The breeds most frequently abandoned

As for an animal's sex, the managers of pounds and shelters were asked whether, in their professional experience, they considered an animal's breed to be a potential risk factor for abandonment. The five[19] who responded were in agreement that breed is indeed a potential risk factor for dog abandonment, but not for cats.

According to the respondents, very few pedigree cats are abandoned. Indeed, as the vast majority (over 93%[20]) of abandoned cats are not identified (I-CAD Category 1), they are not recorded in the French cat stud book (LOOF). By contrast, in those categories containing identified abandoned cats (Categories 2 – 5), 20 to 40% of abandoned cats are recorded in the LOOF (Table 10).

This nevertheless constitutes a tiny proportion of abandoned cats (around 1% of abandoned cats). For this reason, the FRCAW did not ask I-CAD for a more detailed analysis of the breeds of abandoned cats.

Table 10. Distribution of cats recorded in the LOOF across the identified abandoned cat population in 2020 (Author, FRCAW based on I-CAD data).

	Category 2		Category 3		Category 4		Category 5	
Registered as pedigree	Number of animals	Proportion (%)	Number of animals	Proportion (%)	Number of animals	Proportion (%)	Number of animals	Proportion (%)
Yes	1,154	24	477	27	154	40	214	38
No	3,740	76	1 285	73	232	60	356	62

[19] One of the six respondents chose not to answer this question.
[20] Average percentage of the the total number of abandoned cats between 2016 and 2021 represented by cats recorded under I-CAD Category 1.

For dogs, according to the five[21] managers of shelters and pounds who answered the question, the most frequently abandoned dog breeds are, in particular, breeds that are 'fashionable'. Dogs in Categories 1 (known as attack dogs) and 2 (guard and defence/protection dogs), are also described as being more frequently abandoned, as are dogs considered difficult to train. Hunting dogs were also mentioned as being more frequently abandoned.

The most abandoned breeds of dog named by the respondents were dogs of the Belgian Shepherd Malinois type and American Staffordshire Terriers.

As for cats, given that most abandoned dogs (over 66%[22]) are unidentified, pedigree dogs recorded in the French dog stud book (LOF) form a very small part of the abandoned dog population. For this reason, in testing the hypotheses proposed by respondent practitioners, general breed characteristics were tested rather than breeds themselves. These general breed characteristics are recorded by veterinarians in the national identification database for domestic carnivores at the time of the identification procedure[23]. According to I-CAD, up to three breed characteristics can be provided for a single dog. Only the main breed characteristics are studied here, that is, the first breed characteristic recorded by the veterinarian. This main breed characteristic does not constitute a fixed percentage of the dog's phenotype profile, it is given by the veterinarian as an indicator.

The breed characteristics most often recorded for each of the different categories of the I-CAD data were analysed. For 2020, in raw numbers, the dogs most frequently abandoned were dogs that looked like shepherd dogs, Labrador Retrievers, Malinois, Jack Russells, American Staffordshire Terriers, Yorkshire Terriers and German Shepherds (Table 11). We can note that the list includes the breeds mentioned by the five practitioners who responded to the questionnaire. Unsurprisingly, dogs described as 'Shepherd Dog', and 'Labrador Retriever' are among the most frequently abandoned dogs, particularly among Category 1 animals (dogs not identified before arrival at the pound or shelter), since many cross-bred dogs share these breed characteristics. We can further surmise that dogs with these breed characteristics make up the majority of abandoned dogs simply because these breed characteristics are those most widely found in the general French dog population. This precludes any conclusion that possession of these breed characteristics constitutes an increased risk factor for abandonment for dogs.

[21] One respondent chose not to answer this question.
[22] Average percentage of Category 1 dogs in the I-CAD data in relation to the total number of abandoned dogs between 2016 and 2021
[23] Recorded breed characteristic can be changed following a morphological assessment or a contradictory opinion from another veterinarian.

Table 11. Classification of the 3 main breed characteristics of identified and abandoned dogs in each of the I-CAD data categories (in raw numbers) (Author FRCAW, based on I-CAD data)

Classification 2020	Identified dogs		Category 1		Category 2		Category 3		Category 4		Category 5	
	Breed*	Number	Breed*	Number	Breed*	Number	Breed*	Number	Breed*	Number	Breed*	Number
1	Labrador Retriever	783,458	Shepherd dog	4,440	Labrador Retriever	972	Labrador Retriever	703	American Staffordshire Terrier	86	Yorkshire Terrier	42
2	Yorkshire Terrier	746,253	Labrador Retriever	3,267	Belgian Shepherd (Malinois)	701	Belgian Shepherd (Malinois)	647	Belgian Shepherd (Malinois)	59	Labrador Retriever	41
3	Jack Russell Terrier	646,333	Belgian Shepherd (Malinois)	1,515	Jack Russell Terrier	512	American Staffordshire Terrier	487	German Shepherd	21	German Shepherd	39

* *Main breed characteristic*

Table 12. Classification of the three main breed characteristics of abandoned dogs in the first three I-CAD categories (in proportion to the identified population) (Author: FRCAW based on I-CAD data).

Classification 2020	Category 1				Category 2				Category 3			
	Breed*	Number abandoned	Identified population	Proportion abandoned	Breed*	Number abandoned	Identified population	Proportion abandoned	Breed*	Number abandoned	Identified population	Proportion abandoned
1	Shepherd Dog	4,440	128,813	3.45 %	Anatolian Shepherd	38	11,143	0.34 %	Anatolian Shepherd	49	11,143	0.44 %
2	Spanish Greyhound	375	12,210	3.07 %	German Mastiff	86	30,850	0.28 %	German Mastiff	113	30,850	0.36 %
3	Braque	343	12,553	2.73%	Argentine Mastiff	80	31,773	0.25 %	American Staffordshire Terrier	487	145,768	0.33 %

* *Main breed characteristic*

The ranking of the main breed characteristic of abandoned animals was therefore re-calculated by including, for each breed characteristic, the number of abandoned dogs in the total number of identified dogs (Table 12). To prevent the ranking from being distorted by dogs with so-called 'rare' breed characteristics, for which very few dogs are identified compared with the overall population, only breed characteristics recorded in over 10,000 identified individual animals were included in this analysis. Clearly, for breeds with very small numbers, the abandonment of a tiny number of dogs (or even of a single dog) can produce a high percentage of abandoned animals and could therefore wrongly lead to the conclusion that there is a high abandonment rate for such breeds. Accordingly, 436,063 dogs with 'rarer' breed characteristics were removed from the analysis (representing 4.6% of identified dogs). Results are given for 2020 alone, but the top three most abandoned dog breeds in each of the I-CAD categories are effectively identical year on year from 2018 to 2020.

For dogs in I-CAD Category 1 (unidentified animals collected by pounds or refuges), shepherd-type dogs are both those most abandoned in raw numbers (with 4,440 individuals recorded in 2020) and those most abandoned in proportion to the total number of their breed (3.45% of shepherd dogs are abandoned in Category 1). Likewise, in I-CAD Category 3 (identified animals collected by a pound and then transferred to a shelter), dogs with American Staffordshire Terrier characteristics are in the top 3, both for most frequently abandoned dogs in raw numbers (with 437 animals recorded in 2020) and for dogs abandoned in proportion to the total number of their breed (0.33% of American Staffordshire Terriers are abandoned). Particular attention should therefore be paid to the analysis of motivators for the abandonment of dogs with these two breed characteristics.

Of abandoned dogs who are already identified (Categories 2 and 3), Anatolian shepherds and German mastiffs are consistently those most abandoned in proportion to the total numbers of their respective breeds. Membership of a group with these breed characteristics could therefore represent an increased risk factor for abandonment for such dogs.

Last, we can note that Labrador Retrievers, who have high reported abandonment rates for all I-CAD categories other than Category 4 (Table 12), are ranked only 20th when abandonments are considered as a proportion of their breed classification numbers in Categories 1 – 3 in 2020. The same is true for Malinois type dogs, who do not feature in the top 20 breeds when abandonments are considered as a proportion of their breed numbers in Categories 1 and 2 in 2020. This observation appears to confirm the hypothesis that the high recorded rates of abandonment for dogs with 'Labrador Retriever' and 'Belgian Shepherd' breed characteristics, simply reflect the fact that they are the most widespread breed characteristics for dogs in the general French dog population, and that membership of a group with these breed characteristics does not correspond to an increased risk of abandonment for such dogs.

Recommendation 15:
The analysis of breed characteristics carried out in this report is preliminary in nature and needs to be refined to determine whether some breed characteristics or 'types' of dog are indeed associated with higher abandonment rates than others, and whether this could be a risk factor. Other directions for research are already being considered with I-CAD, for example the establishment of a 'breed type' indicator that would allow certain phenotypically and behaviourally similar breeds to be grouped together. Such an indicator would allow the more frequently abandoned breed types to be identified and would include both common and rarer breeds in the analysis. Furthermore, this indicator could also enable one or more secondary[1] dog breed characteristics that were not included in the present analysis to be taken into account.
There is also potential interest in analysing breed characteristics in relation to motivators for abandonment to determine whether certain breed characteristics are associated with particular motivators for abandonment, with or without a causal relationship between the two. This would enable improvements to be made to awareness-raising among adopters.
In any future analysis, particular attention should be paid to the breed characteristics highlighted in this report, especially to shepherd-type dogs and American Staffordshire Terriers, whose abandonment figures are high both in terms of raw numbers, and when the percentage of abandoned dogs in relation to the total numbers for their breed is factored in.

3.2.5. Geographical distribution of abandonments

The geographical distribution of abandonments was analysed for the year 2021[24], to determine whether some regions are associated with higher abandonment rates. Total numbers of abandonments by region were first established, followed by comparison of the proportions of abandoned animals in relation to the identified animal population for each region (Figures 10, 11 and 12). The results suggest that the regions associated with a higher abandonment rate are:

- French overseas *départements* and territories (DOM-TOM) for both cats and dogs
- Hauts-de-France for cats
- Grand Est for cats
- Pays de la Loire for cats
- Occitanie for cats.

[24] 2021 was selected for analysis because the results for this year closely resemble those for 2018 and 2019 (2020 having been the exception, due to the health crisis).

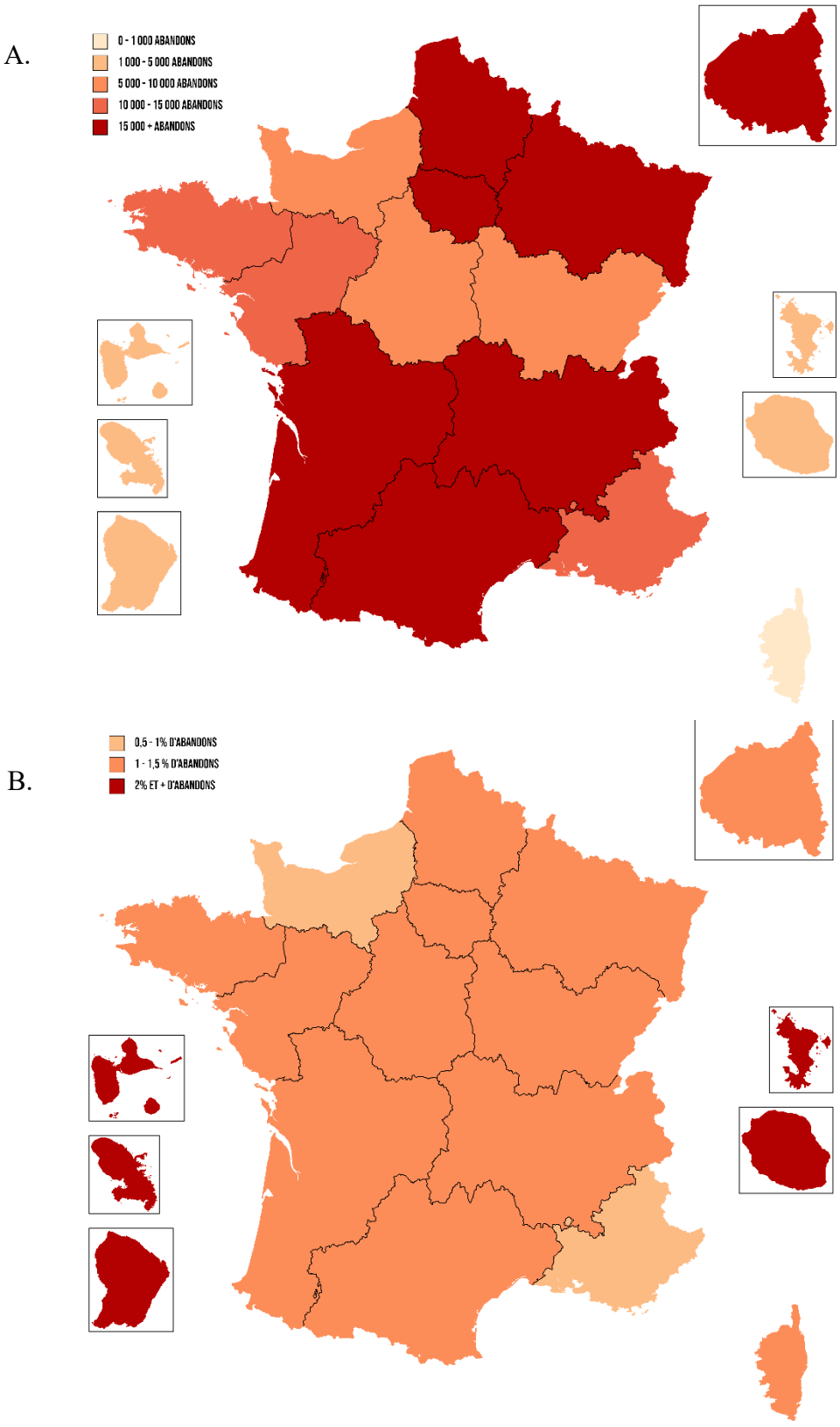
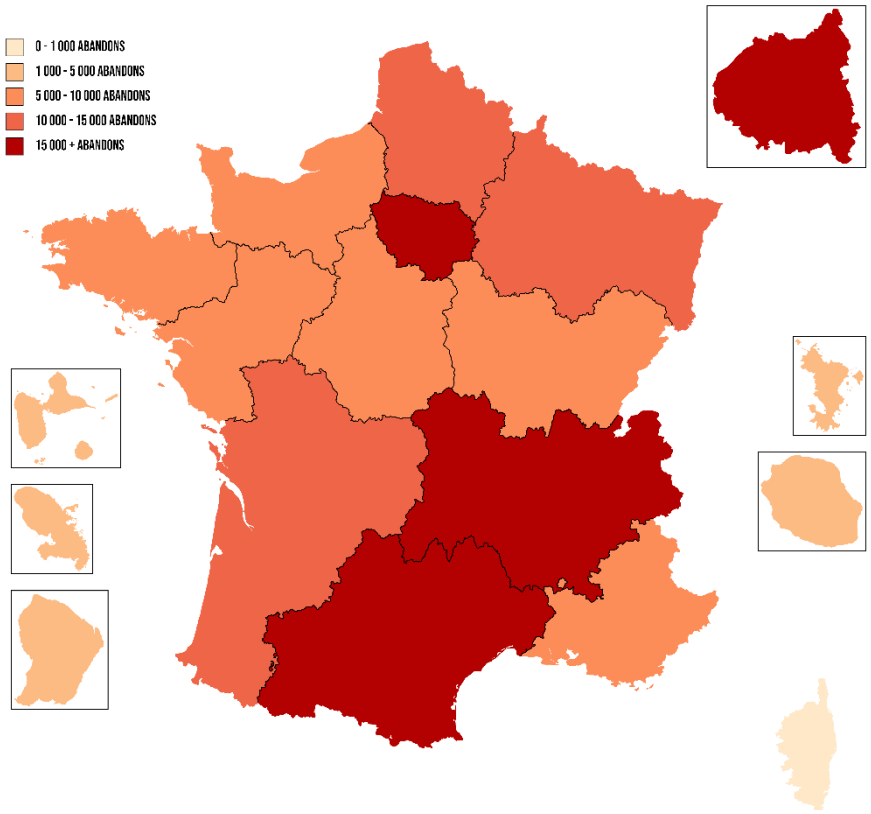


Figure 10. Distribution of dog and cat abandonments in France in 2021 in terms of A. number of abandoned animals by region and B. number of abandonments as a proportion of total regional animal population (Author: FRCAW using I-CAD data)

A.



B.

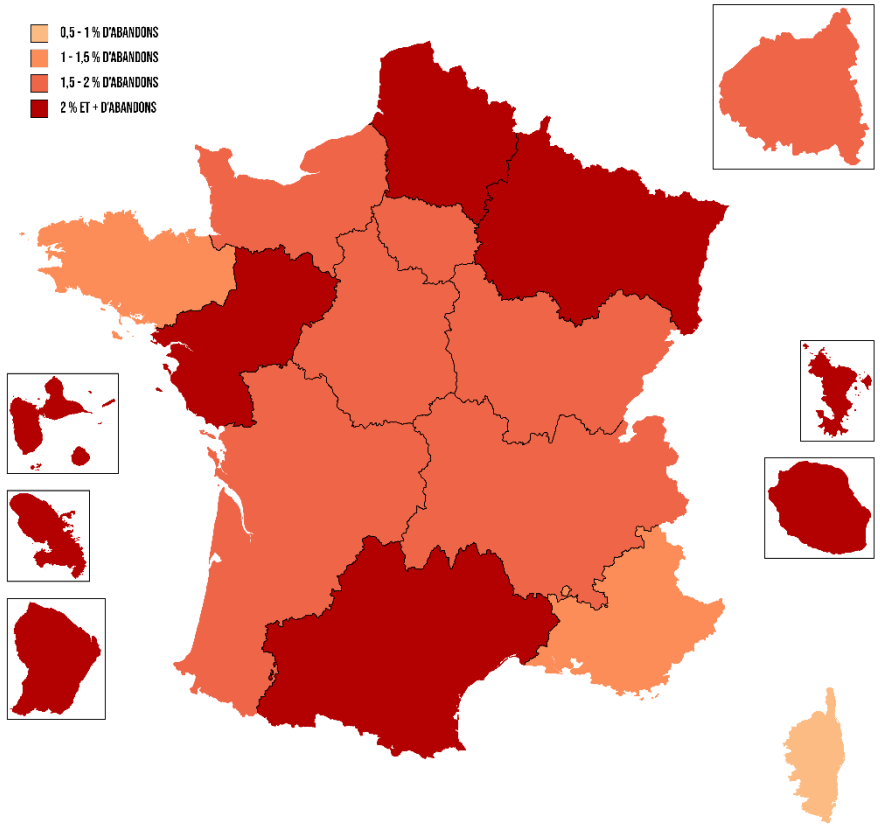
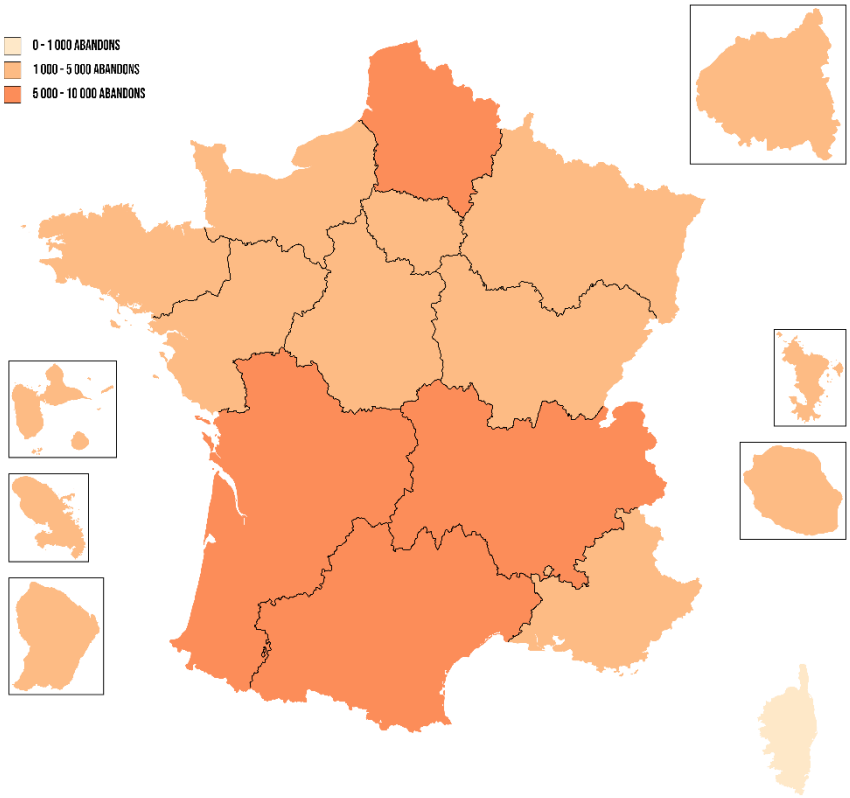


Figure 11.Distribution of cat abandonments in France in 2021 in terms of A. number of abandoned cats by region and B. number of abandoned cats as a proportion of regional totals for identified cats. (Author: FRCAW from I-CAD data)

A.



B.

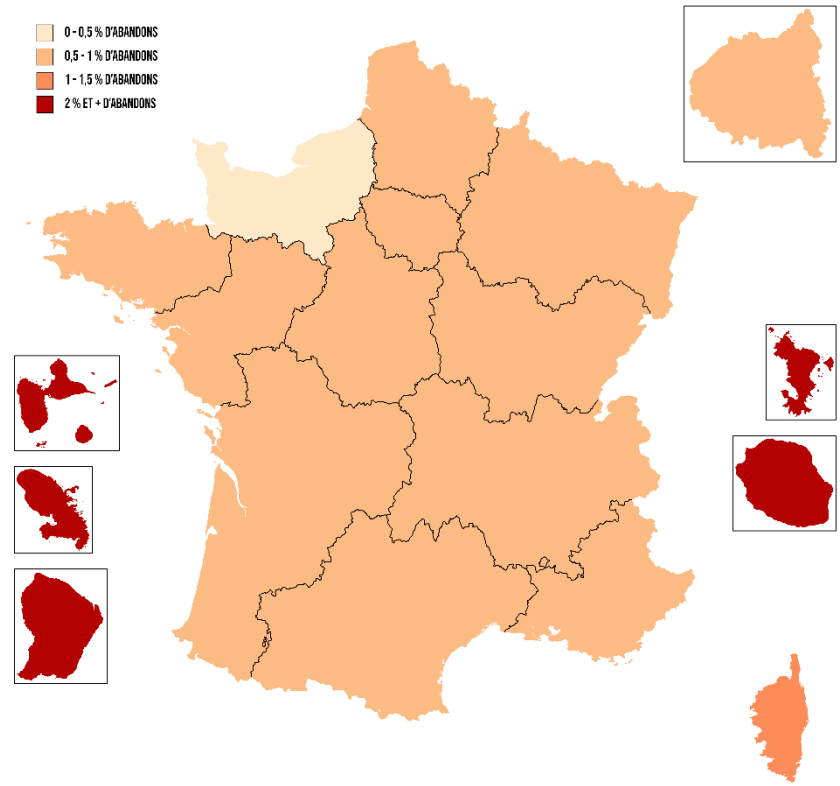


Figure 12. Distribution of dog abandonments in France in 2021 in terms of A. number of abandoned dogs by region and B. number of abandoned dogs as a proportion of regional totals for identified dogs. (Author: FRCAW from I-CAD data)

Abandoned animals nevertheless represent only a relatively small percentage of the populations of identified animals in each region[25], even in regions where abandonments appear to occur more frequently.

These disparities can be explained by differences in practice between the regions. Indeed, the figures for those regions that carry out more sterilisation and identification campaigns for stray animals in order to rehome them show a higher percentage of abandoned animals (due to the current method of calculation for abandoned animals). This is likely to be the case in the DOM-TOMs, where the number of stray animals is higher. The higher numbers are particularly striking in the case of dogs, there being greater numbers of individual strays in the DOM-TOMs than in the regions of continental France.

Recommendation 16:
This analysis provides an initial overview that requires further refinement. It nevertheless demonstrates the need to rethink how we calculate abandonments, the current figures being strongly dependent on the number of stray animals in each region and the measures taken to rehome these animals.
An appropriate next step might be to verify whether certain forms of abandonment are statistically more frequently associated with particular regions. A more detailed analysis by *département* could also be helpful in this.

3.2.6. How abandoned animals have been acquired

The FRCAW asked respondent managers of shelters and pounds about a possible link between the manner of acquisition of an animal and its abandonment. All six respondents replied that, in their view, the way in which an animal is acquired can increase the likelihood that it will be abandoned. Of the acquisition methods listed, those most often chosen by the respondents as a risk factor were:

- **Acquisition from an individual on line:** 6 out of 6 respondents associated this method with lack of advice or inappropriate advice provided to the adopters, encouraging ill-considered acquisitions;
- **Acquisition from a known individual:** 3 out of 6 respondents associated this method with lack of advice or inappropriate advice provided to the adopters;
- **Acquisition from a pet shop:** 3 out of 6 respondents associated this method with lack of advice or inappropriate advice on an animal's needs provided to the adopters.

[25] The highest percentage of abandoned animals by region is that in the DOM-TOMs, reaching 2.36%.

No data on the manner of acquisition of animals is currently available in the national identification database for domestic carnivores, so it has not been possible to test these hypotheses.

Recommendation 17:
Provision of data on the method of acquisition of an animal to the OCAD database would allow the testing of hypotheses in future, thereby improving targeting of the animal acquisition methods that present the greatest risk to animals.
I-CAD would provide the following list of acquisition methods in particular: animal advertised on the internet, rescued stray, animal born in the ownership of the current owner, animal acquired from an individual without payment, animal purchased from an individual, animal purchased from a professional, animal acquired following the death of another owner.
These form a core list that can be developed via further information from practitioners on the ground.

4. The consequences of abandonment for the welfare of domestic carnivores

Following consultation between the scientific experts on dogs and cats identified by the FRCAW, a number of hypotheses concerning the consequences of abandonment and the associated risk factors for animal welfare were put forward, based on existing scientific and technical knowledge. However, given how little discussion exists of the consequences of abandonment in the scientific literature, the following section takes what the experts themselves had to say as its main focus. A risk analysis exercise should be contemplated so that the hypotheses set out below can be validated.

4.1. Drastic change of environment: the primary source of stress for any abandoned animal

In the view of the experts questioned by the FRCAW, a characteristic common to all abandoned pets is the experience of a drastic change of environment, causing stress and leading to the loss of reference points (living environment, relationship with litter mates and humans). The degree of stress varies according to the environment (for example, climate conditions, sounds, predators, isolation etc.), but will also depend on the individual abandoned. Indeed, certain predispositions in an animal or, equally, individual characteristics such as temperament, age and events experienced, can affect the degree to which it adapts, both mentally and physically, to a brutal change of environment.

In abandoned animals, the consequences of stress associated with a change in environment vary, as does their duration. Manifestations include behavioural changes or an increase in particular behavioural characteristics (anxiety, fear, running away, aggressiveness, etc.), stereotypies,

apathy, food problems or even refusal to eat, problems with urination, potentially leading to more serious problems (liver and urinary tract issues in cats in particular), illness (coryza in cats for example) and, more generally, a degradation in the animal's mental and physical state of health.

All these consequences associated with stress in an animal will be exacerbated in varying degrees depending on the number of stress factors to which the animal is exposed following its abandonment.

4.2. Entering the shelter

The second characteristic common to many abandoned animals is their accommodation in a shelter. Although length of stay and conditions of confinement vary enormously between animals, all have to adapt to the restricted housing conditions of the shelter and/or pound (for those not taken directly to a shelter).

4.2.1. Negative consequences inherent to confinement

Many factors inherent to the functioning of shelters can be a source of stress for abandoned dogs and cats. Particular issues can thus be: living in a cage (a substantial reduction in the freedom of movement of dogs and cats); shared accommodation, especially for cats (Ottway and Hawkins, 2003); risk of contamination by pathogens (linked to the proximity to other animals) which can impact the health of animals who are initially healthy; ambient noise (Eagan et al, 2021), and contact with unfamiliar humans.

Another stress factor on arrival at a shelter is the castration of the animal. In addition to the pain, fear and other forms of stress generated by a surgical operation for an animal already subjected to the stress of unfamiliar surroundings (cf 4.1), it is important to remember that such an operation can lead to secondary health problems in animals. Further, a recognised consequence of gonadectomy is its longer-term impact on animals, such as behavioural problems (for example, aggressiveness), or the development of a fear of humans, a consequence that is even more problematic in that the animal is destined for adoption. These negative consequences are greater when castration is performed on pre-pubescent animals or those already suffering from behavioural problems (Titeux et al., 2021).

4.2.2. Other negative consequences

The particular practices and staffing of individual shelters can lead to other negative consequences for abandoned animals. Issues include: the housing of animals in groups, causing stress and the injuries associated with problems in the sharing of space and attacks by other animals; housing dogs and cats near each other, which can be a stress factor for the latter (McCobb et al., 2005); inappropriate feeding practices (no food on a Sunday, for example); lack of care; and arbitrary and unscientific behavioural assessments that focus on the aggressive character of dogs and prevent the creation of opportunities to interact with other dogs in a 'normal and agreeable' way (Patronek and Bradely, 2016). Last, practical constraints can sometimes force shelters to move animals from one location to another, sometimes very far apart, increasing the stress to which the abandoned animals are subjected.

Recommendation 18:
The negative consequences of admission to a shelter, other than those associated with captivity itself, will depend on how the abandoned animals are housed and cared for. The creation of a good practice guide for shelters, as detailed in the Edict of 3 April 2014, could allow good practices to be established and standardised, thereby limiting some of the negative consequences experienced by animals held in a shelter.

4.2.3. Positive consequences

Some practices can help abandoned dogs and cats to adapt to their new environment. Among these practices, the housing of dogs in pairs largely encourages socialisation and reduces the emergence of problems linked to isolation. Likewise, the temporary homing of animals with foster families, rather than in kennels and catteries, encourages socialisation and familiarisation with humans and makes it possible to avoid the combination of stress factors inherent to shelters (cf 4.2.1). Refamiliarization programmes and follow-ups with adopters are also good practices designed to ensure that adopted animals will not have to suffer from the negative consequences of abandonment for a second time. Last, keeping together siblings or animals that have previously lived together before abandonment helps to mitigate abandoned animals' loss of reference points.

Recommendation 19:
It is important to note that the FRCAW has no detailed knowledge of the actual practices found in French shelters. To be able to identify which practices need to be avoided or strengthened, a mapping exercise would need to be conducted concerning the practices employed in French shelters.

4.3. Possible consequences classed according to type of abandonment

4.3.1. Animals found straying

A dog or cat found straying by a pound will have been left to its own devices for an unspecified time. The individual animal may be wounded (from a road accident or an attack by other animals, for example). Its state of health may also have been compromised by infections that are new to it (for example FIV or FeLV for cats) or by the loss of access to care, should it already be suffering from illness or disease. Depending on the resources available, it may also have undergone extended periods of hunger or thirst, or extreme temperature stress when outside temperatures have been very high or low. A litter of unweaned kittens, for example, would be very unlikely to survive such conditions.

Unsterilised abandoned females may also become pregnant. Consideration must then also be given to the fact that such animals could spend longer in the shelter to ensure that their offspring are weaned before being rehomed.

As well as the negative consequences already listed, abandoned animals living wild have to cope with an additional change in environment in the form of the period they spend at a pound before arriving at a shelter. What is more, their health status is often unknown, meaning that they must undergo a quarantine period during which their freedom of movement is greatly restricted, and which also delays their availability for adoption. In light of the risk of rabies (a class B notifiable disease in France), animals are required to undergo a quarantine period (for example, in cases where they exhibit motor and/or behavioural problems and no information is available on their usual behaviour), a monitoring period (for biting or scratching animals), or even euthanasia.

Last, once an animal has arrived in a shelter, lack of information on its history or the reason for its abandonment may cause staff to misinterpret the animal's behaviour and/or be unable to provide all the information necessary for prospective adopters to be able to take on the animal. The associated risk is that the animal will find it hard to adapt to its new environment or may even fail entirely to adapt, leading to its subsequent return to the shelter by the adopter (cf 4.3.5).

The particular case of stray or feral animals[26]

Stray or feral animals are not included in the current definition of abandoned animals because they have no owner. Nevertheless, it is important to consider them here because they number among the animals who may be collected by pounds and/or shelters and then put forward for adoption. These animals are distinctive in that they are far less familiarised with humans than

[26] Domesticated species of animal living in the wild

are companion animals. Arrival at the pound and subsequent integration in the adoption system can, in these cases, be a source of even greater stress than that experienced by abandoned companion animals. Feral animals can have greater difficulty than others in adapting to their new families, leading to escape attempts or displays of behaviours that are not appropriate to life in a private household. The risk here is that they remain at the kennels or cattery for a long time (cf 4.2.2) and/or are returned to the shelter after adoption (cf 4.3.5)

Recommendation 20:
Currently, the sterilisation status of stray animals found and brought to a pound is not recorded. The inclusion of this information in the OCAD database (with the option to choose 'unknown sterilisation status' when the latter is not obvious) would enable a more detailed assessment of the risks associated with abandonment. Indeed, for cats in particular, the straying of unsterilised animals can lead to the birth of unwanted litters and add to overcrowding in shelters. Access to the number of unsterilised fertile animals collected by pounds would make it possible to quantify this risk.

4.3.2. Animals left in front of a shelter

Animals left directly at a shelter's door suffer from the same consequences as strays, except that they are likely to have spent less time fending for themselves (with a reduced chance of infection, accidents, injuries, pregnancy, etc.), and that they have not automatically been processed through a pound.

A distinguishing characteristic of animals left in front of a shelter is that they may have been tied up or shut in a box. This subjects them to the stresses of isolation and deprivation of movement, an effective deprivation of comfort, and an inability even to satisfy their natural need to urinate or defecate. A dog that has been tied up is also at risk of self-injury.

The fate of these animals is similar to that of abandoned animals found straying (cf 4.3.1) because their histories and the motivators for their abandonment remain unknown.

4.3.3. Animals surrendered to a shelter (accompanied by a declaration of abandonment)

The act of surrendering an animal directly to a shelter with a declaration of abandonment allows the animal to avoid all the potential suffering associated with being a stray. These animals inevitably experience the stress induced by a change of environment and life in a shelter (cf 4.1 and 4.2) but this may be compensated by better access to food and care once the shelter takes over their care, especially when their owners have abandoned them for financial reasons. Furthermore, because the health status of these animals is known, they can avoid quarantine.

What is more, information on the reasons/motivators for abandonment and additional details concerning the animal itself (temperament, life circumstances, habits, etc.) enable shelter staff, donors, visitors and adopters to know about an animal's individual characteristics and to avoid mistakes that might cause an adoption to fail (cf 4.4.1). Honesty is required from the owner when providing information on the motivators for abandonment to avoid any misinterpretation of the animal's behaviour.

4.3.4. Animals removed from a person's home for reasons of ill treatment

Animals who have been removed from their owner's home because of ill treatment have already suffered abuse, whether deliberate or not, before they arrive at a shelter. Examples of abuse are extended hunger or thirst, lack of medical care, and injuries with a risk of physical and/or behavioural consequences (e.g. negative perceptions of humans in the case of animals who have been beaten or poorly familiarised).

It is important to note that, in such cases, abandonment can have positive consequences for the welfare of dogs and cats. Indeed, despite the negative consequences listed in 4.1 and 4.2, removal from an abusive environment remains beneficial for the animal. While living conditions in shelters are not optimal, it can be assumed that, overall, they nevertheless make it possible for the needs of these animals to be better met than in their initial circumstances, while providing the opportunity for them to be rehomed eventually in a household more suited to their needs.

4.3.5. Animals returned to a shelter following adoption

Returns of animals to shelters following adoption also number among the negative animal-welfare consequences, such animals being faced once again with captivity in kennels or a cattery (cf 4.4.1). Nevertheless, these returns can provide shelters with the chance to gain a better understanding of an animal's issues (particularly where the animal's history is unknown) and to provide better information for prospective adopters. This information can even allow shelter staff to address and resolve an animal's behavioural difficulties, thereby optimising the chances of future adoption success.

4.4. Aggravating factors

All the negative welfare consequences of abandonment for dogs and cats can be exacerbated by specific aggravating factors.

4.4.1. Abandonment and difficulties in rehoming

Although some animals are quickly rehomed[27] and under good conditions (most kittens, for example), this is not true of all animals. Despite shelters' efforts to find people prepared to take on animals who are hard to adopt (because they need a home without other cats or dogs, or children due to aggressiveness, particular behavioural requirements, etc.), the latter may face a long stay in the shelter or may even find themselves returned.

Indeed, behavioural problems can be a motivator for abandonment. What is more, the period of severe stress associated with abandonment can exacerbate such problems. Animals abandoned for behavioural reasons can thus experience greater difficulty in being rehomed and, once they have been, the adopting families may find it impossible to look after them, ultimately returning them to the shelter. Being returned to the shelter represents a fresh source of stress for an animal, making subsequent adoption even harder.

It is harder to achieve a successful adoption when the motivator for abandonment and an animal's history remain unknown to shelter staff. This can prevent the latter, in some cases, from providing the animal with the care it requires and this can, in turn, increase the stress suffered by the animal, thereby notably exacerbating its behavioural problems.

The risk for these 'unadoptable' animals is that they may remain in the shelter indefinitely, or may even eventually be euthanised.

4.4.2. Length of time spent in the shelter

Although some animals who spend a long time in a shelter can grow accustomed to their environment, the time spent in a shelter can contribute to a change in the welfare levels of abandoned cats or dogs. Long stays in a shelter can notably contribute to frustration in animals, particularly in dogs, who are generally 'easily aroused' and have 'difficulties to relax' compared with cats (Raudies et al. 2021).

4.4.3. The particular case of dogs in restricted Classes 1 and 2

Dogs in Class 1 cannot currently exchange hands or be acquired France. When a Class 1 dog is abandoned, a morphological diagnosis by a qualified veterinarian must be carried out to determine whether it indeed falls into Class 1. This additional measure means that the length of time it spends in a shelter before it can be rehomed increases proportionately.

[27] According to I-CAD, the average time spent by an animal in a shelter before being rehomed is 60 days for cats and 53 days for dogs.

Ownership of dogs in Class 2 can be transferred. However, prospective adopters must have previously obtained a keeper's licence before they may adopt such a dog. This procedure can act as a brake on the rehoming of such animals, increasing the time they spend in the shelter.

4.4.4. The case of animals who have been very attached to their owners

In all the cases mentioned in part 4.3, the consequences suffered by the animal can vary according to its history and can be particularly influenced by its relationship with its owner(s) and/or other animals in the shelter. Animals accustomed to a human's presence in their home for much of the time and to being shown much affection can be more distressed by isolation and can also have greater difficulty in adapting to the living conditions in a shelter, where the quality of human-animal relationships cannot be as high. It is important to remember that, in the Anses definition, an animal's state of welfare varies according to its expectations. An animal accustomed to receiving much affection from its owners will experience greater suffering from the absence of affection than an animal who has not developed this expectation.

Figure 13 provides a summary of the positive and negative impacts of abandonment on the welfare of dogs and cats as identified by the FRCAW expert group.

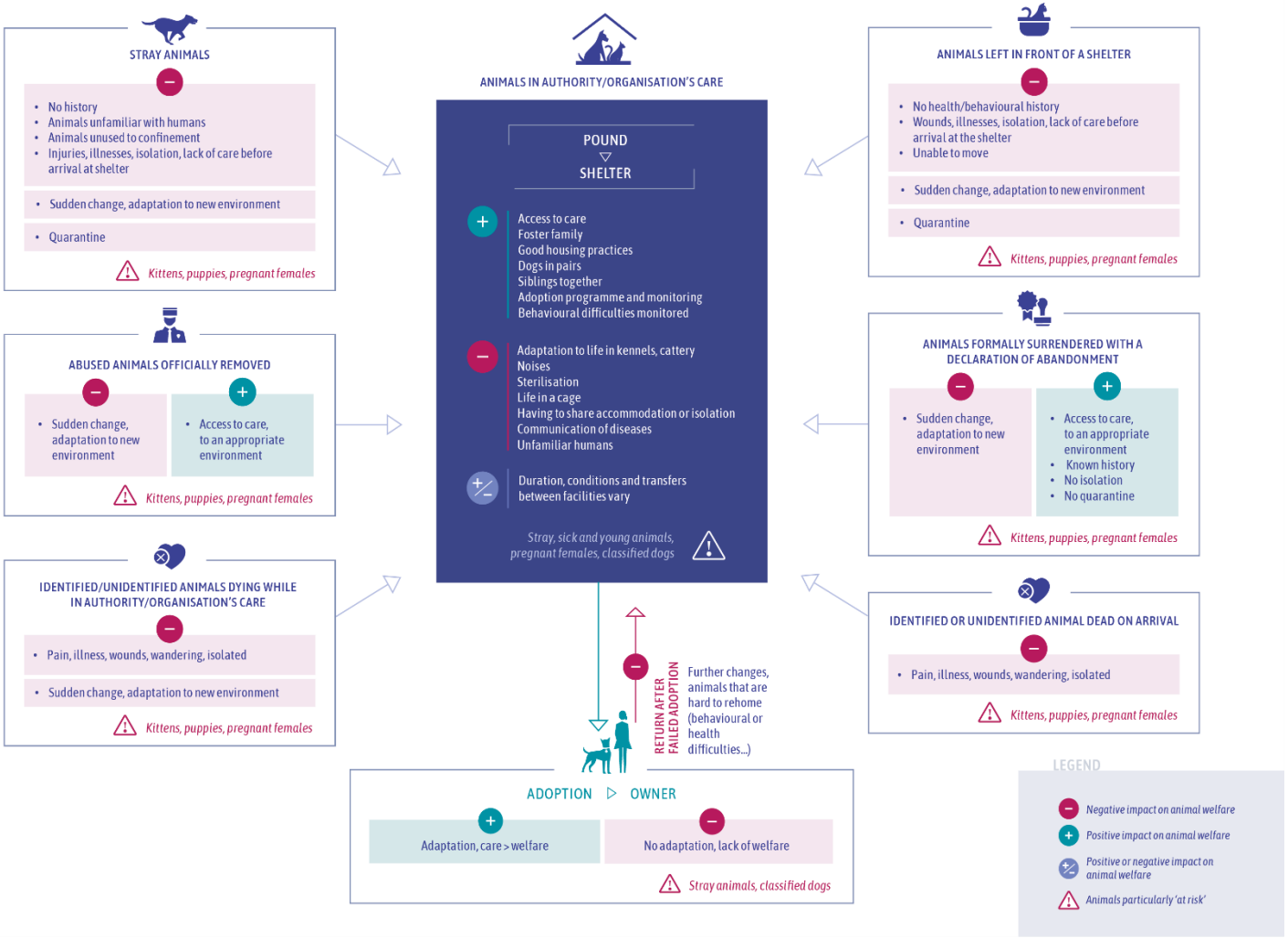


Figure 13. Overview of abandonment factors with positive and negative impacts on the welfare of dogs and cats (Author: FRCAW)

4.5. What becomes of animals admitted to a pound – an analysis of I-CAD data

Among the animals who are classified as abandoned, I-CAD is able to track animals that have entered a pound and been transferred subsequently to a shelter (Tables 13 and 14). We can note that although most animals transferred to a shelter are rehomed (79.5% of cats and 84% of dogs), 5% of abandoned cats and 1% of abandoned dogs die in the pound and 4.5% of cats and 3% of dogs transferred to shelters can be assumed to die there.

Table 13. Tracking data for dogs and cats having entered pounds in 2019 (Author: FRCAW, from I-CAD data)

	Species	Subsequent event	Proportion
Animals entering a pound	**Cats**	**Die in the pound**	**5%**
		Transferred to a shelter	50%
		Owner collects animal	18%
		Directly rehomed from the pound-shelter	2%
		Other[28]	25%
	Dogs	**Die in the pound**	**1%**
		Transferred to a shelter	32%
		Owner collects animal	49%
		Directly rehomed from the pound-shelter	3%
		Other[29]	15%

Table 14. Tracking data for dogs and cats transferred from a pound to a shelter in 2019 (Author: FRCAW from I-CAD data)

	Species	Subsequent event	Proportion
Animals transferred to a shelter	**Cats**	**Die in the shelter**	**4,5%**
		Rehomed	79,5%
		Other[30]	16%**
	Dogs	**Die in the shelter**	**3%**
		Rehomed	84%
		Other[31]	13%**

Recommendation 21:
Where possible, pound admissions should be systematically entered in the OCAD database, ensuring that the only recorded departures from the pound are returns to the owner, deaths, or transfers followed by relinquishments to individuals. Thus, 'other' would not be included among reasons for leaving the pound and the quantification of data flows for these animals could be carried out more rigorously.

[28] Change of details, declaration of a lost or found animal, cancellation of entry to the pound, possibly dead.
[29] Change of details, declaration that an animal has been lost or found, cancellation of admission to the pound, possibly dead.
[30] Change of record card, change of characteristics, possibly dead.
[31] Change of record card, change of characteristics, possibly dead.

We can also note that cats die younger in facilities for abandoned animals than in their owners' homes (Table 15). This is also true for dogs, though the difference is less marked. Although causes of death are not known, it can be noted that all the consequences of abandonment previously mentioned may lead to early death in an animal.

Table 15. Median age of dogs and cats at the time of declaration of death, shown by the premises at which death is declared (2020) (Author: FRCAW, from I-CAD data).

		Median age at declaration of death (in years)			
Species	**Sex**	**Pounds**	**Pound-shelters**	**Shelters**	**Private households**
Cats	F	0.53	2.56	4.64	12.13
	M	0.39	2.08	4.55	10.45
Dogs	F	11.67	10.67	9.92	12.44
	M	11.43	9.67	10.09	12.17

Conclusion and general recommendations

This report constitutes a first audit of the available data on abandonment. It does not claim to be comprehensive, but it provides a certain number of facts to be communicated and shared. It also formulates attention points for consideration that would furnish a better understanding of the mechanisms of abandonment, thus making it possible to implement more efficient and effective measures to manage the risks and consequences of abandonment (Table 16). Further analysis could usefully be carried out in the near future by the members of OCAD to confirm and provide more detail on the trends to which this report draws attention. We can note that the relevance of future analysis and the effectiveness of the OCAD's actions will depend on both a precise definition of abandonment to be adopted by all OCAD stakeholders and on the contribution and transparency of all involved.

Many actions must still be taken simultaneously and across the spectrum, both upstream of abandonment, as a means to avoid overcrowding in shelters and save the animals avoidable stress and suffering, and downstream of abandonment, to ensure the best possible care is taken of abandoned animals. The FRCAW notes, in particular, the need for further investigation of the welfare consequences of abandonment in domestic carnivores.

Last, the FRCAW has focused in this report on the abandonment of cats and dogs in France, but abandonment also affects companion animals from species other than domestic carnivores. It is therefore essential to create a central hub, as has been done for domestic carnivores, to collect the available data on the abandonment of these other species of companion animals.

Table 16. Summary of the FRCAW's recommendations concerning the OCAD. Organisations shown in italics are statutory authorities. (Author: FRCAW).

Actions	Responsibility to be requested from	Information to be added to the OCAD's database
Define abandonment	FRCAW and practitioners (pound and shelter managers) OCAD steering committee	
Obtain figures for the numbers of cats and dogs in France, with their associated confidence levels	I-CAD, Kantar, FACCO	
Estimate the number of stray cats in France	*OFB* Shelters, pounds, municipal authorities	
Harmonise selection criteria for free cats	Shelters and societies *FRCAW*	
Identify available data in the registers of shelters and societies to be included in the OCAD's database	Shelters and societies	
Create a centralised database specific to OCAD	OCAD steering committee	
Provide information for the OCAD database	Pounds / shelters / societies	Arrivals and departures of animals (particularly adoptions and failed adoptions)
	Pounds / pound-shelters	Owner contacted Y/N
	Pounds / pound-shelters	Owner responded to contact Y/N
	Pounds / pound-shelters / shelters	Reason for animal's death (all deceased animals whatever their identification status)
	Shelters	Motivator for abandonment
	I-CAD / shelters / societies	Method of acquisition
	Pounds / shelters / societies	Sterilisation status of stray post-pubescent animals
Carry out more detailed statistical analysis to refine observations of trends	I-CAD and FRCAW	
Record practices put in place in shelters	Shelters	
Produce a good practice guide for shelters	Shelters	

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Annexe 1. Questionnaire for managers of shelters, pounds or pound-shelters

1. Definition of abandonment

1) For each of the following statements, indicate whether or not you agree with the statement *(Tick only one box for each statement)*

	Agree	**Somewhat agree**	**Somewhat disagree**	**Disagree**
A. Abandonment refers to the fact that an animal held by a pound has not been reclaimed by its owner and has therefore been relinquished to a shelter.				
B. Abandonment refers to the act of leaving one's companion animal in front of a shelter.				
C. Abandonment refers to the act of surrendering one's animal to a shelter accompanied by a declaration of abandonment.				
D.. Abandonment refers to the act of deserting, neglecting or choosing to forsake one's companion animal.				
E. Abandonment refers to the act of leaving a companion animal without care, without the possibility of eating or drinking.				
F. Abandonment refers to the act of allowing one's companion animal to roam on the public highway.				

1) How would you define the abandonment of an animal *(Feel free to suggest a definition that is not the same as the above statements)*

……
……
……
……
……

2) What different sorts of abandoned animals have you encountered (according to the definition you gave to the term)? *(Tick the appropriate box(es))*

	Cats	Dogs
Animal found roaming		
Animal found uncared for in a private home		
Animal left in front of a pound or shelter		
Animal surrendered by an owner to a shelter (accompanied by a declaration of abandonment)		
Animal returned to a shelter following an adoption		
Animal found dead		

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Other instances *(you can list more than one)* :

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2. Causes of abandonment

1) What in your view is/are the principal cause(s) of the abandonment of companion animals in France? *(You may give separate answers for dogs and cats)*

……
……
……
……
……
……

2) Of the following, which can, in your professional experience, be motivators **<u>linked to the situation of an owner</u>** that may lead to an animal's abandonment *(Tick the appropriate box(es) if you consider any of the following to be a possible motivator)*

	Cats	Dogs
Death		
Medical problem/incapacity/allergy		
Departure to a retirement home		
House move		
Divorce		
Birth of a child		
Departure on holiday		

3) From your professional experience, can you identify other motivators **<u>linked to the situation of an owner</u>** that may lead to the abandonment of an animal *(You may give separate answers for dogs and cats)*

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……

4) Of the following, which can in your professional experience be a motivator **linked to the animal** that may lead its owner to abandon it? (*Tick the appropriate box(es) if you consider any the following to be a potential motivator)*

	Cats	Dogs
Animal is too old		
Animal is ill		
Animal is too expensive		
Behavioural problem(s)*		

* If you ticked this box, please describe the behavioural problem(s):
For dogs:
……
For cats:
……

5) From your professional experience, can you identify other motivators **linked to the animal** that may lead its owner to abandon it? *(You may give separate answers for dogs and cats)*

……
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6) Of the following, which in your professional experience can be **other motivators** for an owner to abandon an animal/animals? *(Tick the appropriate box(es) if you consider any of the following to be a potential motivator)*

	Cats	Dogs
Birth of unwanted litters		
Owner poorly informed on the needs of the animal		
Unidentified animal		
Underestimate of the size of the adult animal		

7) From your professional experience, can you identify **other motivators** that might lead an owner to abandon an animal? *(You may give separate answers for dogs and cats)*

……
……
……
……

8) Of the motivators you ticked or mentioned above, list the five that are the greatest causes of abandonment in your professional experience:

	a. For cats	b. For dogs
1.		
2.		
3.		
4.		
5.		

3. Risk factors for abandonment

1) In your professional experience, abandonment is more frequent (*tick the box for any answer that applies)*

□ In urban areas □ In the countryside □ This factor has no impact

Justify your choice: *(You may give separate answers for dogs and cats)*

……
……
……
……

□ For females □ For males □ This factor has no impact

Justify your choice*: (You may give separate answers for dogs and cats)*

……
……
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……

□ After a pet shop purchase □ After purchase from a breeder □ After purchase at a show □ After adoption from a shelter/rescue society □ After adoption/purchase from a known individual □ After an online adoption/purchase from an individual □ This factor has no impact

Justify your choice: *(You may give separate answers for dogs and cats)*

……
……
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……

2) In your professional experience, are some breeds or breed types of dogs abandoned more than others?

□ Yes □ No

If yes, which? Why, in your opinion?

……
……
……
……
……

3) In your professional experience, are some cat breeds abandoned more than others?

□ Yes □ No

If yes, which? Why, in your opinion?

……
……
……
……
……

4) Can you identify other factors that can increase the risk that an animal will be abandoned? (*You may give separate answers for dogs and cats)*

……
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4. Consequences of abandonment

1) What are the main consequences for their welfare of the abandonment of companion animals in your professional experience? (*You may give separate answers for dogs and cats)*

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Questions directed at societies/associations only – *Please only reply to the following questions if they directly concern you or the entity you work for*

1) Do you have criteria to differentiate between a cat that will be released after being sterilised and identified (free cat) and a cat that will be kept at the shelter to be rehomed?

……
……
……
……

2) Do you systematically record the release of a free cat?

☐ Yes ☐ No

3) Based on your professional experience, do you know of situations where euthanasia procedures carried out at the shelter are not recorded?

☐ Yes ☐ No

If yes, state what they are:
……
……
……
……

Questions directed at pounds only – *please only reply to the following questions if they directly concern you or the entity you work for*

In your professional experience, do you know of certain cases where the owners of identified animals found straying are not contacted?

☐ Yes ☐ No

If yes, would you say that the owners tend to be contacted:

	For a cat	For a dogh
Rarely (under 25% of cases)		
Sometimes (25-50% of cases)		
Often (50-75% of cases)		
In most cases (more than 75% of cases)		

1) In what cases in particular might the owners not be contacted? *(If appropriate, you may give separate answers for dogs and cats):*
……
……
……
……

2) What method of communication is used to contact the owners? *(if more than one method is used, please rank them from most used to least used)*

□ Ordinary postal delivery □ recorded delivery □ Phone call
□ other: ……..

If more than one method is used, please give examples of why one method is chosen over another:
……
……
……
……

3) If the owner doesn't respond to contact from the pound, is this information recorded somewhere?

□ Yes □ No □ It depends

If you answered 'it depends', please give details of what it depends on
……
……
……

4) How frequently does an owner fail to respond to contact:

□ very rarely (under 5% of cases) □ rarely (between 5% and 10% of cases)
□ infrequently (between 10% and 30% of cases) □ quite frequently (between 30% and 60% of cases)
□ in most cases (between 60% and 90% of cases) □ practically always (above 90% of cases)

5) How frequently do owners reply that they do not want to collect their **cat** when the pound has succeeded in contacting them?

□ very rarely (under 5% of cases) □ rarely (between 5% and 10% of cases)
□ infrequently (between 10% and 30% of cases) □ quite frequently (between 30% and 60% of cases)

□ in most cases (between 60% and 90% of cases) □ practically always (above 90% of cases)

1) How frequently do owners reply that they do not want to collect their **dog** when the pound has succeeded in contacting them?

□ very rarely (under 5% of cases) □ rarely (between 5% and 10% of cases)
□ infrequently (between 10% and 30% of cases) □ quite frequently (between 30% and 60% of cases)
□ in most cases (between 60% and 90% of cases) □ practically always (above 90% of cases)

1) In your professional experience, do you know of situations where euthanasia procedures carried out at the pound have not been recorded?

□ Yes □ No
If yes, which?
……
……
……
……