

# Will the cow and her calf be together in the future?

A FRAMING ANALYSIS OF THE DEBATE ON COW-CALF SEPARATION IN DENMARK

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## ACKNOWLEDGEMENTS

I did it! I always expected that finishing my thesis would be the same as climbing the Mount Everest; a never ending story. I thought that I would get lost all the time, and by the time I would find the path again, I would realize I was at the same point as where I started. But actually I can compare it better to Little Red Riding Hood, I only dawdled a little bit along the way. I may have sometimes felt as if I was eaten by a big bad wolf (figuratively), but in the end my path lead pretty straight to my destination.

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Thanks to all of you for giving my thesis a fairy tale ending instead of it ending in a horror scenario.

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**ABSTRACT**

A growing global attention to animal welfare includes an increasing public awareness of farm animal welfare issues. Different understanding between groups (e.g. authorities, consumers and farmers) of what is good animal welfare has an influence on the future production of food. A current controversial issue in European countries like The Netherlands and Denmark is separation of cow and calf immediately after birth. In Denmark, the government accepted a legislation, which states that new-born calves in conventional dairy farms should stay at least 12 hours' post-partum with their mother.

The main aim of this thesis was to analyse how different stakeholders framed and communicated the process of the making and implementing of the cow calf separation legislation in Denmark. Therefore 19 semi-structured interviews were held with authorities, veterinarians, advisors, scientists, NGOs and farmers. Using framing analysis, barriers to implement new legislation and different phases of policy process, the communication and framing process was analysed, to unravel evolving positions of the different stakeholders involved.

Results show that the cow-calf legislation was a compromise, drowning in other legislation, whereby cows obligated on pasture was framed as more important. Another important frame is the wait-and-see frame, because farmers should implement this part of the law before 2024, so there is time left for the authorities to see how they will control and enforce this law. Last important point is the uncontrollability of the legislation. The authorities cannot inspect it and enforce the current legislation, because it is hard to see how old a new-born calf is. The research gives a novel insight into the difference between drafting legislation and how it will be implemented and complied within the practice. The three phases of the policy process; understanding, planning and decision-making, and managing the problem, were not implemented in the way it was meant. This led to a failure of implementation of new animal welfare legislation, and makes it doubtful that the cow and the calf, regarding to this legislation, will be together in the future.

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## 1. INTRODUCTION

Stricter rules and a heated public debate: farmers are in for tough choices (Bodde, Dokter, Oppewal, & Tholhuijsen, 2010). Researchers expect, in 2050, that 9 billion people will live on our planet (Godfray, et al., 2010). The reason why intensive livestock farming has increased, since farm animal production is expected to double (Ilea, 2009). This increase of intensive livestock farming has different effects, namely: climate-relevant emissions from livestock farming, the decrease of quality of life for the farmers and neighbours of the farms, high-density animal production can increase livestock disease incidence, new antibiotic-resistant diseases, and air, groundwater and surface water pollution associated with animal wastes (Wing & Wolf, 2000; Dirscherl, 2013; Tilman, Cassman, Matson, Naylor, & Polasky, 2002)

Another point, which is caused by intensive livestock farming, is that the number of people that work with animal production have decreased enormously in the Netherlands. There is only a small part of the population that now feel connected to the animal production sector (Benard & de Cock Buning, 2013; Lassen, Sandøe, & Forkman, 2006). The percentage of the Dutch population that is professionally involved in animal production and –services in general is 1.5% (de Cock Buning, Pompe, Hopster, & de Brauw, 2012). As far as dairy farming is concerned only 1 out of 1000 Dutch citizens is a dairy farmer.

While less people work with animals, more and more people are concerned about the animal welfare. In 2008, more than 82% of Europeans evaluated the welfare of farm animals within the range of moderate to very bad (Vanhonacker, Verbeke, Van Poucke, & Tuytens, 2008). Different stakeholders see animal welfare in different ways. For example, animal welfare is conceptualized in terms of animals' living environment, husbandry systems, health and including nutritional aspects by people who do not work with animals. The people who work with animals often look at health as an indicator of animal welfare (Ventura, Von Keyserlingk, Schuppli, & Weary, 2013). This already shows difference in framing a concept related to animals.

Another difference in framing farming issues are some practices which are considered as inherently wrong by most people, are not seen this way by farmers. Some of those practices are: applying chemical fertilizers or pesticides to crops; beak trimming; tail docking; planting genetically modified crops; and the decision to dehorn the animals (Cardoso & James Jr, 2012; Swanson, 1995). A new issue, which can be added to this list, is the practise regarding, to cow and calf separation in dairy farms. Citizens currently see this practise as separating the mother and baby at a too early stage, while farmers see this as necessary, because the cow has to go back into production of milk (Vonk, Burgers, & Van der Kolk, 2016).

In this chapter we go into more detail about the cow-calf separation and the discussion points, which will then bring us to the problem statement.

### 1.1 ISSUE IN ANIMAL WELFARE: THE COW-CALF SEPARATION

For a long time, research has been done on the pros and cons of cow-calf separation in the dairy sector. One of the first studies was done in 1977 by Hudson and Mullord (1977), which looked at duration in which cow and calf establish a bond (Hudson & Mullord, 1977). Afterward numerous studies have been done on this subject, of which the results are widely spread.

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A cow usually has her calf in a calving pen (Schoemaker, 2006). This space must be kept hygienic and includes straw for bedding (Cools, Bossaert, Van Loo, de Kruif, & Opsomer, 2008; Schoemaker, 2006). When the calf is born, the farmer removes the calf from the cow. Farmers differ in the approach on how long the cow and calf are kept together. In the Netherlands there are more than 17.600 dairy farms (Van Dongen, 2016). 16% of those farmers remove the calf as early as possible, 50% let the cow dry lick their calf, 25% separate the cow and calf within a day, 6% separate the cow and calf within two days and the other 2% keep the cow and calf together longer than two days (Hopster & Bergsma, 2016).

Views of scientists on what is the best time to separate cow and calf differ, this is shown in the headings below (Ventura, et al., 2013).

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### 1.1.1 EARLY SEPARATION

There are farmers who remove the calf early from the cow, because cow and calf will receive less stress (Weary & Chua, 2000; Flower & Weary, 2001; Metz, 1987). In addition, early removal also reduces the risk of disease transmission. Diseases can be transmitted through manure, milk and/or grains (Wagenaar & Langhout, 2006). The maternal behaviour of a cow is initially under neuro-hormonal control. When the calf is born, this control gradually shifts to the calf which stimuli maintains and initiates maternal behaviour of the post-partum cow (Hopster & Bergsma, 2016). By prematurely removing the calf; the incentives for the cow to exhibit maternal behaviour are removed. Therefore, this maternal behaviour will stop sooner or even not show at all (Edwards & Broom, 1982). The final advantage of housing a calf individually is that the farmer can fully monitor the calf on health, nutrition, and manure (Schoemaker, 2006). The farmers can also monitor and control the colostrum intake, for instance with the use of tube-feeding when a new-born calf has difficulties drinking the recommended amount of colostrum (Vasseur, et al., 2010). Therefore, they remove the calf from the cow early, to be sure that the calf will have the recommended amount of colostrum. Colostrum intake is very important for the health and survival of the calf. A successful colostrum management program requires calves a sufficient volume of clean, high-quality colostrum within the first few hours of life (Godden, 2008). The first hours are important, because within the first hours the calf can adopt the colostrum immunoglobulins best. When the colostrum absorption of a calf decrease it is important the colostrum will have a higher quality (Weaver, Tyler, VanMetre, Hostetler, & Barrington, 2000). Hopster and Bergsma (2016) found that the health of calves and cows is the most important reason that dairy farmers separate calves from their mothers so early (Hopster & Bergsma, 2016).

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### 1.1.2 STAY TOGETHER LONGER

Farmers who keep cow and calf together longer also have their reasons. Keeping calf and cow together enables that the cow can lick their calf intensively. Licking is known to stimulate the calf's vital functions (blood circulation, oxygen and colostrum intake, standing and eliminative behaviour) and therefore promotes health (Lidfors, 1996). A calf drinks faster and more when they drink from the mother cow. If a calf gets ingests more colostrum, their immune system will be better (Hopster, O'Connell, & Blokhuis, 1995). The amount of colostrum is used as an argument for both views. Calves also grow faster when they stay with the cow in comparison to the calves that are separated from the dam early (Flower & Weary, 2001; Metz, 1987). Additionally, the calves get accustomed to the

milk diet early because they can decide for themselves when they drink (Newberry & Swanson, 2008). These calves also exhibit more social behaviour to other cows and calves as opposed to the calves, which are removed early from their mothers (Flower & Weary, 2001). Finally, when a calf drinks from the mother it is reassured and thus less stressed (Lee, 1996).

## 1.2 PROBLEM STATEMENT

For a lot of species a certain time where the young should remain with their mother is in the Netherlands legally determined, except for cattle (Verwer & Bestman, 2012; Overheid, 2015). This may have opened a debate the separation of cow and calf. A dairy cow calves every year, to maintain the momentum of milk production (Wagenaar & Langhout, 2006). So stopping calf production is now not an option for the dairy sector, it might be an option in the future. The cow-calf separation has both advantages and disadvantages. It is important to be aware of both parts, as both the advantages and disadvantage have an influence on the welfare of the calf and cow.

In the Netherlands the separation case has been a big issue. Wednesday February 9 2016, the House of Representatives adopted a motion. This motion said that there must be a plan within six months, on how it can be made possible for calves to stay with their mother for longer in the dairy sector (PartijvoordeDieren, 2016). The Agriculture and Horticulture Organisation (LTO) finds the motion incomprehensible (Luiten, 2016). Among the farmers there is anger and disbelief regarding to the motion (Bruins, 2016). Many media are writing about this subject, all with different views.

In the Netherlands there was only the idea for a legislation on this topic, but in Denmark cow-calf separation legislation was implemented, six years ago in 2010. The government accepted a law, which stated that calves in conventional dairy farms should stay with their mother in an individual calving pen for at least 12 hours (Nielsen, 2015). Farmers had to implement the law immediately if they already had separate calving pens. If the farmers only had a common calving pen, then they had until 2024 to build those individual calving pens.

It is interesting to understand how farmers come to decide whether or not to engage in the activity of cow-calf separation and what factors influence that decision even the legislation is already made (Cardoso & James, 2012). With this thesis we want to analyse how the case has been developed and how the process took place in Denmark. How was the new legislation made and implemented? In what way did the different stakeholders communicate with each other? Was enough support gathered for the implementation of this new legislation? Or was this new legislation implemented without support of all stakeholders? The Danish case of cow-calf separation will likely contribute to our understanding on how legislation on animal welfare is made and adopted.

Previous sub-heading shows different scientific reviews on the cow-calf separation. It shows how this separation influences the cow and calf, and how this can be measured. But there is a lack of research and information regarding how 'humans' are influenced by the cow-calf separation case. In this thesis we focus on how stakeholders' influence each other according to the cow-calf separation case. Stakeholders probably view and frame this issue in a certain way. Science, which presents facts of cow-calf separation, cannot completely bridge the gaps, because disagreements on this topic are rooted to some extent in value differences among participants (Ventura, et al., 2013).

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In this thesis the following research questions will be answered:

Will the cow and her calf be together in the future? Cow and calf will be together in the future if the Danish legislation is implemented and maintained. Therefore, we have to investigate how the communication and the process of the legislation have been done. For that reason, the process will be analysed by gathering data from the involved stakeholders. In order to answer this main research questions four sub-research questions have been stated, namely:

- *What was the reason for making the cow-calf separation legislation in Denmark?*
- *What frames did Danish stakeholders have about issues and involved stakeholders in the cow-calf separation case?*
- *How did Danish stakeholders communicate with each other during and after the process cow-calf separation legislation?*
- *What were the frames of different stakeholders in preparation phases and the implementation of the legislation?*

In the following chapter we will dive deeper in the controversial issues and the implementation of new legislation. Also, different theories are explored to find out which one can be implemented the best in this case.

## 2. LITERATURE REVIEW

The discussion on cow-calf separation might be the start of a change in the dairy sector. Such a change must involve a good 'story', told by the right people, at the right time, in the right place and to the right people (Klerkx, Aarts, & Leeuwis, 2009). If problems, causes, and solutions are not given, than they will be created in the minds of citizens by other citizens, leaders, organizations, and government agencies (van Lieshout, Dewulf, Aarts, & Termeer, 2011). This can lead to different stories by different stakeholders. In this thesis we will focus on the communication between stakeholders and their view on the issue. Communication is needed to form effective relationships and to solve conflicts of interest (Van Woerkum & Aarts, 2008). In this chapter a description is given of the different theories, which will serve as a theoretical framework. First the concept controversial issue will be discussed; the actors and then the framing interactive processes are discussed. Afterwards different possible barriers for implementing new legislations are outlined and lastly different ways to use framing analysis, where the different phases of policy process were added are discussed.

### 2.1 CONTROVERSIAL ISSUES

There are a lot of stakeholders involved in the cow-calf separation case, namely: farmers, farm suppliers, food and processing industries, consumers, public authorities, researchers, non-government organisations (NGOs) and politicians (Verbeke, 2009). These stakeholders are part of a complex system. The cow-calf separation case is a complex system because these actors have different backgrounds, interests and opportunities, and sometimes have totally different perspectives on both problems and solutions that are involved (Aarts & Van Woerkum, 2006). Complex systems are irregular, complex and dynamically evolving in time (Boccaletti, Latora, Moreno, Chavez, & Hwang, 2006). It is hard to get a grip on these kinds of systems. Probably the cow-calf separation issue is a controversial issue. An issue is controversial when a significant number of people argue about it without reaching a conclusion (Oulton, Dillon, & Grace, 2004). The involved stakeholders have different backgrounds, knowledge, and interests in the problem and therefore they search for different solutions and stories. Farmers have knowledge and interests that differ from for instance consumers and politicians who also have other backgrounds and knowledge than farmers. This makes it difficult for example for farmers to explain their practice to society (Bruins, 2016). And vice versa, only 60% of the farmers understood that citizens have problems with early separation because of 'naturalness' (Hopster & Bergsma, 2016).

A controversial issue is seen by involved stakeholders in different ways. Research shows that animal welfare can be seen in different ways. Not all stakeholders have the same perception of animal welfare. But there is also a huge part which is overlapping. The difference and similarity is shown in figure 1. Animal welfare perception can be influenced by geography, culture, religion, and farming styles (Nijland, 2016).

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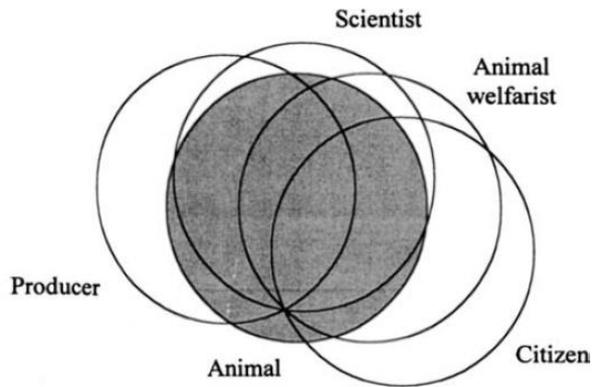


Figure 1: overlapping perception of animal welfare (Bracke, De Greef & Hopster, 2005)

Not only can animal welfare be seen in different ways. Also the possible perceptions of animal production are different. Table 1 gives an overview of the different possible initial positions of the stakeholders regarding animal production. In this table different stakeholders are added, namely: commercial actors, scientists, farmers, citizens, animal protection organisations and government and policy makers. These stakeholders are also included in the interviews. Through combining different articles this overview of the possible initial positions was made. This overview is useful to get more insight in how to communicate with different stakeholders about animal production. It is beneficial to communicate in a way, which triggers their initial position.

Table 1: possible initial positions of stakeholders regarding animal production

Stakeholders	Possible initial positions
Commercial actors: livestock producers, food processing industries and retailers	Economic goals (Verbeke, 2009)
	Technical performance (Verbeke, 2009)
	(Re)production parameters (Verbeke, 2009; Bracke, et al., 2005)
Scientists	Measure welfare with quantifiable parameters (Bracke, et al., 2005)
	Biological, physiological and behavioural parameters (Verbeke, 2009)
Farmers	Regular care: habit and good intentions (Verbeke, 2009)
	Basic needs (food, water, climate), (Sørensen & Fraser, 2010)
	Health and productivity ( Sørensen & Fraser, 2010; Vanhonacker, et al., 2008)
	Good stockmanship (Sørensen & Fraser, 2010)
	Costs (Lassen, et al., 2006)
Citizens	Visual images and icons: environment, good stockman ship, space, cleanliness, straw, outdoor access, freedom to move
	Natural behaviour and natural instincts Verbeke, 2009; Bracke, et al., 2005; Sørensen & Fraser, 2010; Lassen, et al., 2006; Leenstra, Munnichs, Beekman, & van den Heuvel-Vromans, 2008; Vanhonacker, et al., 2008
	Basic animal needs (food, water, ventilation, space and light) (Sørensen & Fraser, 2010).

	Six segments: environmentalists, ecologists, animal friends, health concerned, unpronounced (undecided) and economists (Verbeke, 2009)
Animal protection organisations	Animal nature and maximal care (Verbeke, 2009)
	Attach greatest importance to painful procedures (Sørensen & Fraser, 2010).
Government/policy makers	Views of welfare based on relationships with producers, consumers, NGOs and scientists (Bracke, et al., 2005)
	Focus on animal behaviour, driven by political debate (Sørensen & Fraser, 2010)

## 2.2 POSSIBLE BARRIERS FOR IMPLEMENTING NEW LEGISLATIONS

A controversial issue could have different barriers. The legislation made in Denmark is quite new. Farmers, who do not have individual calving pens yet, have until 2024 to fully implement this legislation. Implementing new legislation is not as easy as it looks. There are barriers for farmers to implement legislation. According to Termeer (2009) people are open to change when they experience ambiguity and have to cope with issues that can no longer be understood within the existing routines and schedules (Termeer, 2009). This shows that it is important that farmers see the relevance of implementing this new legislation. Termeer showed five different barriers of adopting new legislations, namely:

- Conflicting conviction concerning good policy making
- Stereotyping potential partner
- Framing of the situation
- Fear
- Cover-up strategies (Termeer, 2009)

These five barriers could also be relevant for this thesis.

When farmers implement this new legislation, they then have to change their practice. Ellis-Iversen et al. (2010) made a model to see the implementing process of disease control programs at dairy farm levels (Ellis-Iversen, et al., 2010). If farmers control the disease, the animal welfare of their cows will improve. The cow-calf separation legislation was made together with other legislation which should improve the animal welfare for animals in the dairy-production. Ellis-Iversen uses extrinsic barriers and intrinsic barriers. The intrinsic barriers are affected by behavioural beliefs, normative beliefs and belief in self-efficacy (see figure 3). The extrinsic barriers are influenced by community and industry, culture and society and knowledge, skills and ability (see figure 4).

Figures 3 and 4 show what the extrinsic and intrinsic barriers from farmers when they adopted the disease control. It could be that the same extrinsic or intrinsic barriers will influence the farmers to implement or not implement the cow-calf separation legislation.

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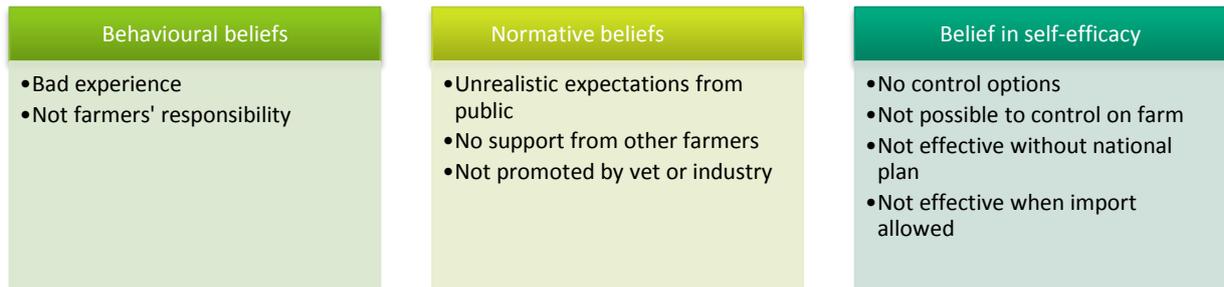


Figure 2: intrinsic barriers (Ellis-Iversen, et al., 2010)



Figure 3: Extrinsic barriers (Ellis-Iversen, et al., 2010)

Shortalla et al. (2016) have done research on farmer's barriers on biosecurity measures on farms. They found three different farmer's barriers, namely:

- Financial barrier
- Time limitations
- Lack of education or knowledge (Shortalla, Rustonab, Greena, Brennana, Wapenaara, & Kalera, 2016).

This shows that a lot of research is done about the barriers of farmers, and therefore this could be relevant for this thesis as well.

## 2.3 FRAMING ANALYSIS

Framing refers to making sense, interpreting, and giving meaning to what happens in the on-going world. People construct specific frames in interaction in order to reach goals (Aarts & Van Woerkum, 2006). In this case there are different stakeholders involved, who might frame the case in a different way, since they have other goals. According to Vink, Boezeman, Dewulf and Termeer (2013), framing is a way of selecting, organising, interpreting and making sense of a complex reality to provide guideposts for knowing, analysing, persuading and acting (Vink, Boezeman, Dewulf, & Termeer, 2013).

Framing is the process by which decisions, policy issues, or events require different meanings from different perspectives with the goal to convince others (Metze, 2014; Termeer, Dewulf, Breeman, &

Stiller, 2013). The way parties' frame an issue can be very different, reflecting diverse ideas about what the issue is about, what should be done, and by whom (Metze, 2014; van Lieshout, et al., 2011). Their framing is influenced by different factors; those factors can be categorized by the frames of reference. The frame of reference is used to describe the construction of the stakeholders' perceptions (Nijland, Aarts, & Renes, 2013). Those frames of references can be split up in:

- Convictions (opinions about the way things are, assumptions that are taken for granted)
- Values (opinions about the way things should be)
- Norms (the translations of these values into rules of conduct)
- Knowledge (constructed from experiences, facts, stories, and impressions)
- Interest (economic, social and moral interests) (Te Velde, Aarts, & Van Woerkum, 2002)

Frames of reference are normally used to analyse complex situations. Vanhonacker et al. (2008) used those frames of references as a quantification of the similarities and differences between aspects relating to farm animal welfares as valued by farmers and citizens (Vanhonacker, et al., 2008). If the stakeholders have the same frame of reference, then it would be easy to communicate with each other and come to one common conclusion, because interpersonal communication mostly occurs among like-minded people (Stevens, Aarts, Termeer, & Dewulf, 2016).

There are different kinds of framing, in this chapter we will zoom in on the types of frames. Those frames will give an insight in the development of the case.

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### 2.3.1 TYPES OF FRAMES

There are many types of frames: conflict frame, motivational frame, process frame, power frame, issue frame, problem frame, solution frame, loss/gain frame, collective frames and many more (Dewulf, 2013; Gray B. , 2004; Kaufman & Smith, 1999; Dewulf, Craps, & Dercon, 2004). In this case we are interested in the process of the frame stakeholders have during the development of the case. Therefore, the focus will be on the understanding of the problem, planning and decision-making of the problem, and managing the problem. All these phases are influenced by different frames.

Dewulf (2013) made a distinction between three phases in a policy process, namely: understanding, planning and decision-making, and managing the problem. Each phase has three sub processes (Dewulf, 2013). These phases can also be seen as having a past, present and future (Van Lieshout & Aarts, 2008).

#### Understanding

- Problem detection and initial framing (framing whether there is a problem to be addressed).
- Information gathering and use (framing what available information means).
- Problem definition (reaching agreement on the problem framing).

#### Planning and decision-making

- Developing options (framing the range or nature of options to be considered).
- Option assessment (framing of the kind of expertise that is required).
- Selection of options (framing uncertainty about unintended consequences).

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Managing the problem

- Implementation (how do affected actors frame the adaptation option).
- Monitoring (framing the monitoring requirements).
- Evaluation (framing the goals of evaluation) (Dewulf, 2013).

These nine sub processes will be examined in the interviews, to see if all stakeholders have the same frame or not and how they differ. The different frames mentioned above could be explained within the different phase of the policy process.

## 2.4 ACTORS AND FRAMING INTERACTIVE PROCESSES

As stated before, there are different stakeholders involved in the cow-calf separation case. Those stakeholders can be analysed in different ways. Together with the actor performance we will use two other concepts to analyse the actors in this case. First we will give different types of actors' communication in interaction. Then different types of actors' activities in interaction will be discussed.

### 2.4.1 TYPOLOGY OF ACTORS' COMMUNICATION IN INTERACTION

Communication can be seen as a way to learn about and to position yourself in your environment. In the cow-calf case stakeholders need to know about the other stakeholders, thus the environment and their position towards the other stakeholders. Van Woerkum and Aarts (2008) selected four basic activities: exploring, informing, relating to others, and negotiating. Exploring is seen as a tool to learn about your environment: how do other stakeholders think about, and act on, subjects relevant to the cow-calf separation case. Informing is about positioning and creating a positive image by sharing what they are willing to do and what they are actually doing. If you want to gain control it is important to have a good relationship with the other stakeholders. If you have a good relationship with others, it is easier to predict their behaviour and trust between the stakeholders will arise. Lastly, negotiating is needed to arrive at agreements in the event of different interests (Van Woerkum & Aarts, 2008).

Negotiation processes can be divided into distributive and integrative. If a negotiation process is distributive, then stakeholders hold on to their own perceptions and positions. When having to share, they all try to make sure they get the biggest part (Leeuwis & Van der Ban, 2004; Van Woerkum & Aarts, 2008). With integrative negotiation processes different stakeholders try to make sure everyone gets what they want and need. They try to start together from the bottom and 'bake the cake together' instead of dividing the cake which is done with the distributive process (Dewulf, et al., 2009).

In the cow-calf separation case it is important to get an insight into how the different stakeholders interact with each other. In this thesis we will divide the different stakeholders into those four concepts.

## 2.4.2 TYPOLOGY OF ACTORS' ACTIVITIES IN INTERACTION

The typologies of actors' activities in interaction divide stakeholders in four different categories. Those categories are dependent on a high or low open-mindedness and a high or low availability of cognitions. The model helps to recognize, reflect and discuss actors' interaction behaviours in mutual coherence, which is of high relevance in the decision-making process concerning complex problems.

Stakeholders who are conforming tend to construct the same frames all the times; those frames are called frozen frames. Those frames are expressed by a lot of stereotyping and literal repeating of arguments in different situations. Bureaucrats know about other possible frames, but in interaction they are not willing to recognise or accept them. Therefore, they are not very innovative, nor will they take the initiative to experiment with new directions or ideas. 'Creating' stakeholders can solve complex problems in constructing new, unexpected and original frames that may inspire the whole group. Innovators combine creativity with adequate knowledge and a sense of reality, resulting in problem solving capacities.

		Availability of cognitions	
		-	+
Open-mindedness	-	Conforming	Bureaucratizing
	+	Creating	Innovating

Figure 4: typology of actors' activities in interaction

This model could have been used to see what kind of character different stakeholders took during the process. Aarts and Van Woerkum (2006) stated that all characters are needed in interaction processes (Aarts & Van Woerkum, 2006). If all the stakeholders have the same character than the interaction will not go well.

## 2.5 EDIT THEORIES

The cow-calf separation legislation is a process with different phases. All theories mentioned above will be subdivided into the different phases of policy process. The understanding phase will be influenced by the possible initial positions, typology of actors' activities in interaction and frames of reference. The before-mentioned theories influence this phase, because they all have something to say on how different stakeholders frame a certain problem. Planning and decision-making is influenced by the possible barriers for implementing new legislation. And lastly, managing the problem will be influenced by the typology of actors' communication in interaction, because communication will have a huge impact on how stakeholders handle the legislation in the end. The summary is shown in figure 5.

Understanding	Planning and decision-making	Managing the problem
<ul style="list-style-type: none"> <li>- Possible initial positions</li> <li>- Typology of actors' activities in interaction</li> <li>- Frames of reference</li> </ul>	<ul style="list-style-type: none"> <li>- Possible barriers for implementing new legislation</li> </ul>	<ul style="list-style-type: none"> <li>- Typology of actors' communication in interaction</li> </ul>

Figure 5: dividing theories within the different phases of the policy process

Will the cow and her calf be together in the future?

### 3. METHOD

The aim of this thesis has been to answer the main research question, namely: Will the cow and her calf be together in the future? This research question is followed by four sub-research questions: “What was the reason for making the cow-calf separation legislation in Denmark?; What frames did Danish stakeholders have about issues and involved stakeholders in the cow-calf separation case?; How did Danish stakeholders communicate with each other during and after the process cow-calf separation legislation?; What were the frames of different stakeholders in preparation phases and the implementation of the legislation?”. Those sub-research questions will be used as support of answering the main research question.

Different methods were available to answer this question. In this chapter the methods that were chosen are explained further. Afterwards an explanation is given on how the topics list was made, how the stakeholders were found and lastly how the collected data was analysed.

#### 3.1. RESEARCH APPROACH

In this thesis information have gained on why the legislation was made, insight into how different stakeholders framed the same topic, how they discussed this topic with each other and how they implemented this legislation.

To get this insight different research methods can be used. In this thesis a qualitative approach was chosen. Qualitative approach is used for exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell, 2013). Qualitative approach is therefore a useful method for this thesis. There are different ways to collect data in qualitative research, namely: interviews, observations, documents, records, and films (Strauss & Corbin, 1990). The research looked into a process which had already ended, therefore observations were not possible. There were a few relevant documents available, which were used as well. Records and films were both not available and it also was not possible to make them, since the process had already ended.

Consequently, interviews seemed to be the best option. Interviews were used to explore the personal construction of the individual’s world (Gray, 2013). Interviews can give insights in the demand for communication for several topics (Benard, Schuitmaker, & de Cock Buning, 2014), and they can also show how people make observations of things (Weiss, 1995). Interviews give us an interesting insight in the process of making, communicating and implementing a new legislation. There were different types of interviews, namely: structured, semi-structured, unstructured and non-directive interviews (Kajornboon, 2005). For this thesis semi-structured interviews were used, because this allows two-way communication between the respondent and the researcher (Case, 1990). How those semi-structured interviews were made is explained in the next sub-chapter.

#### 3.2. CONSTRUCTION OF INTERVIEW TOPIC LIST

As said before semi-structured interviews were used in this thesis. A list of key themes, issues and questions were made and these were covered by interview questions as much as possible (Kajornboon, 2005). According to the research questions an interview guide was created. Concepts, which were found in the research questions, were distributed in objectives. Each objective can be translated into one or more topics and for each topic different aspects can be found (Zaalberg, 2015;

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Mason, 2002). The list of aspects was used to create interview questions, and the interview questions were translated to a topic list. This topic list was used during the interview; the interview questions were placed on the side and only used when needed.

The interview guide ensured that the same general areas of information were collected from each participant (Valenzuela & Shrivastava, 2008). During the interviews some topics were added to the topic list, because they seemed to be relevant for the stakeholders. Still, the order of the questions could be changed depending on the participant (Kajornboon, 2005). New questions could also be added during the interview to get more information from the participant (Valenzuela & Shrivastava, 2008).

Two different interview guides were developed and used, one for stakeholders who were involved in the process of making the legislation and one for those who were not involved. For the second group the questions about the making of legislation were reduced. Extra questions about the influence and the application of the legislation for the farm were added. The questions about the how the actual process of the legislation was were hard to answers for outsiders; therefore these questions were more focussed on how they found that the process went. Both interview guides can be found in the appendix (see appendix I up to and including IV).

### 3.3. PARTICIPANT SELECTION AND RECRUITMENT

For this thesis interviews were held with 19 different stakeholders. The 19 stakeholders were divided in two groups: involved in the working group and not involved in the working group.

The working group made the new legislation for dairy cows. This working group was “Arbejdsgruppen om hold af malkekvæg” (working-group on the husbandry conditions for of dairy cattle) (Ministry of Justice, 2009). Within this group a variety of people were present, namely members from: The Danish Veterinary Association, Animal Protection, the Danish Cattle, the Agricultural, Ethics, Animal Welfare Council, Ministry of Food, the Ministry of Family and Consumer Affairs and the Ministry of Justice (Ministry of Justice, 2009). The members of those organisations/groups were important stakeholders, since they have some information about the process of how the legislation was made. Farmers were represented by their farmer’s organisation. Six out of nine stakeholders, who were part of the working group, were interviewed.

The working group was established in 2007. In the meantime, three participants had changed their jobs, however in these instances colleagues who took over their position were interviewed instead. These stakeholders can be found in table 2: list of participants.

Table 2: list of participants

Participants	
Profession	Involved in working group?
Animal protection group 1	Yes
Farmers organisation	Yes
Veterinarian	Yes

Scientist 1	Yes
Scientist 3	Yes
Scientist 4	Yes
Scientist 2	No
Government officer	No
Animal protection group 2	No
Dairy cooperative	No
Advisor	No
Journalist	No
Danish farmer 5 (160 cows)	No
Danish farmer 6 (780 cows)	No
Danish farmer 7 (1200 cows)	No
Dutch farmer 1 (410 cows)	No
Dutch farmer 2 (140 cows)	No
Dutch farmer 3 (470 cows)	No
Dutch farmer 4 (180 cows)	No

After those stakeholders were identified a snowball effect was applied. A snowball effect is used when participants are able to recommend useful potential candidates for study (Marshall, 1996). This meant that after each interview the participant is asked if she/he know other important stakeholders. A scientist, animal protection, dairy cooperative, advisor and a journalist were mentioned by the different stakeholders and therefore they were added.

After the interview with these stakeholders, when no other stakeholders were mentioned, farmers were interviewed. Farmers were also important stakeholders, because they have to implement the legislation in the end. Farmers were interviewed after the people from the working group, because the process was now clearer. The information about the process expanded my background, which made it easier to ask farmers more in detail and made it easier to react to questions from farmers. After the interviews with the people from the working group, the topic list of the farmers changed a bit. There was for instance more focus on the transition period.

When searching for farmers it was important that they spoke English or Dutch fluently and that they differed in the number of cows they kept, because the new legislation will have a bigger influence on farms with a high number of dairy cows than on those with a low number of dairy cows. The reason for this is that the total of individual calving pens the farmers have to create depends on the number of dairy cows they own. The farmers need to make 1 individual calving pen per 25 cows (Ministry of Justice, 2009).

All including farmers were conventional farmers; organic farmers were excluded because they already had a legislation where cow and calf should be together for 24 hours since 2001. Some

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farmers were found by using the Danish database (Miljø- og Fødevareministeriet, 2016), some by using personal contacts and some by using the snowball effect. For this thesis 7 farmers were interviewed; 4 Dutch farmers and 3 Danish farmers. Two Danish farmers spoke fluent English; the other Danish farmer was translated by a Danish speaking Dutch farmer. Two farmers were found by using the Danish database. They were found after searching for a certain number of cows, to make sure different farm sizes were included. Two Dutch farmers were found by personal contacts. The other two farmers were found by snowball effect; those farmers were recommended by another farmer or by researchers who already worked with those farmers.

When interviewing stakeholders, you can categorize the stakeholders into informants and respondents. Informants have knowledge and facts that experts have; they will speak on behalf of the group and from a we-perspective. Respondents speak on personal level: opinions, attitudes, feelings, behaviour and in an I perspective (Valenzuela & Shrivastava, 2008). Farmers are seen here as respondents as it is hard to speak on behalf of this whole group. Because farmers cannot speak for the whole group, interviews with more farmers are needed to get different views which will contribute to the whole picture. The other participants were informants. They might have their own perspective, but overall they are in the position to represent the whole group. Therefore, it was not necessary to get more interviews in that category. More scientists were interviewed, because all four had a specialisation in a different main theme.

Every interview started with a little chat while drinking coffee. This was done to make the participant feel comfortable and at ease (Berg & Lune, 2012). Having interviews with the farmers usually started with a guided tour of his farm. In this way the farmer felt more comfortable with talking, as he could talk as an expert about his farm. All interviews were expert interviews, because the participant had knowledge about the asked topics (Tijmstra & Boeije, 2009). The interviews were held between May 17th, 2016 and July 1st, 2016. All interviews were held at the participant's home or office. The length of the interviews varied between 20 minutes and 60 minutes. All interviews were recorded and the procedure of anonymity was explained to the participants.

### 3.4. DATA ANALYSIS

In this thesis data analysis of the interviews was done by hand. Transcribed interviews were printed and marked with different colours which represented the different main themes. Each interview was transcribed. After all the interviews were transcribed, they were read to try to get a better sense of the whole (Kvale & Brinkmann, 2009).

After this, the process of coding started. According to Malterud (2012) the first step of coding is called the total impression, here the researcher searches for main themes within the chaos (Malterud, 2012). Those main themes changed a bit after each new interview, which gave new insights. After all interviews were discussed four themes became clear, namely: Attitude about cow-calf separation, story about the legislation, reasons for resistance and verbal war. Attitude about cow-calf separation includes the different separations practiced that are used by the different respondent, the reasoning why the separation involves a dilemma, and the different beliefs of naturalness. In the story about the legislation the making of the legislation, the underlying ideas why the legislation was made, management and handling of this legislation and the reasons why the legislation is sub-optimal are given. The lack of explanation, lack of understanding, no money to

change and no resistance are reasons of resistance. And lastly verbal war includes the informing of the farmers, the undervalued feeling of the farmers and the stereotyping of the different participants towards each other.

In the continuous coding those four main themes were marked in four different colours. After all the interviews were marked they were read again. Each marked sentence or paragraph was summarised in a few words. Those words were the beginning of the codes. The codes were gathered in both a deductive and inductive way. In a deductive way the topic list was based on concepts from theories which were found in the literature and added in the research questions. Framing was one of those theories which was included in the research questions. Inductive codes were seen when raised by the participants; this means that they were found from the data (Tijmstra & Boeije, 2009). When all marked items were summarized, different summaries could be grouped together. Those new groups were the codes.

For the analysis a mind mapping technique was used (Verhoeven, 2015). Here the main theme was placed in the middle of the mind map, and the gathered codes were added and surrounded the main theme to create the mind map (Berg & Lune, 2012). According to Walliman (2006) mind maps are used to display a network in a thoughtful way (Walliman, 2006). In this case the mind maps gave an overview of how different codes were related to the main theme (see appendix V up to and including VIII).

All the hard copies of the interviews were cut within the different codes and merged together. Therefore, the same codes gathered from different interviews could be put together easily. Rereading all the collected codes again was a next step in the analysis. In this step the codes out of the data were compared and afterwards they were assigned to the same category (Hammersley, 2006). This means that after all the codes were identified, they were grouped again in sub themes. During this process quotes and codes could shift from one main theme to another if it was a better match, or they could be excluded if there was no support of other quotes and they did not seem relevant anymore. This was done to get and give more meaning to the codes, which is called condensation (Malterud, 2012). In this analysis each main theme ended up having three or more sub themes. The different main and sub themes are displayed in the next chapter.

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## 4. RESULTS

During the analysis of the interview four main themes were found, namely: 1) Attitude about cow-calf separation; 2) stories about the legislation; 3) reasons of resistance, and 4) verbal war. Under each main theme different sub-themes were identified. See table 3 for an overview of main- and sub-themes. The main themes are not arranged chronologically but thematically (Walliman, 2006).

Table 3: results - main themes and sub-themes

<i>Main themes</i>	<i>Sub-themes</i>
Attitude about cow-calf separation	Different separation practice
	Separation as necessary but also including a dilemma
	Different perceptions of naturalness
Stories about the legislation	The making off of the legislation
	Underlying ideas why this legislation was made
	Management and handling of this legislation
	The sub-optimal legislation
Reasons of resistance	Lack of explanation
	Lack of understanding
	No money to change
	No resistance
Verbal war	Who is informing the farmers
	Undervalued farmers
	Making stereotypes about involved stakeholders

### 4.1 ATTITUDE ABOUT COW-CALF SEPARATION

Firstly, it is described how farmers separated cow and calf, and how other stakeholders thought this was being conducted. Afterwards an overview of different reasons why separation is necessary but also includes a dilemma is described. Finally, it is shown how different stakeholders use the notion 'naturalness', when arguing for cow-calf separation.

#### 4.1.1 DIFFERENT SEPARATION PRACTICE

The interviews showed that all participants described the separation practice in different ways. There was very little consensus about when to separate cow and calf. Instead the analysis showed a broad variation on when, why and how cow and calf should be separated. Neither the farmers, nor the other stakeholders being interviewed had consensus about when cow-calf separation should take place.

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The interviewed farmers varied with separation of the cow and calf from immediately till letting them stay together for 36 hours. But no one of them had a strict schedule; it was really depending on when the calf was born. If the calf was born during night-time, it stayed longer with the cow than if it was born just before milking.

Some participants thought it was not possible to separate them immediately. One of those quotations is written below:

*“If they should take the calf away from the cow immediately it is very difficult for them to do. So the calf and cow are already together for some hours. Might not be 12 hours, but 4, 5 or 6 hours before taking away from the cow.”* – Representative from farmers’ organisation.

The participants gave different reasons, when trying to explain why farmers separated the cow and calf in the way they did. The reason that was given by, both farmers and other stakeholders, was that the farmer wanted to make sure that the calf got enough colostrum. It was explained that some farmers forced fed the calf with tube-feeding or they gave the colostrum in a bottle. The majority of participants claimed that it was important that the cow had the opportunity to lick the calf. The licking would stimulate both cow and calf. It stimulated the calf to stand up and start searching for the udder and it stimulated cows to start producing milk. Those reasons are related with management frames; the procedures are done because it fits in their practise. But it is also likely that the procedures have an influence on the health of the calf. Therefore, it also could be connected with the health frame. This is illustrated with a quote of a farmer:

*“The calf stays with the mother so that the calf can be licked. Then the mother is milked by hand and then the colostrum is given in a bottle to the calf, so we know how much colostrum the calf receives. And in this way we are sure that the calf is drinking well.”* – Farmer 2

Another reason that was given by the participants was the disease transmission. Cow-calf should be separated early so the risk of disease transmission was lower. This practise will have an influence on the hygienic in the calving pen. This shows that the farmer is using a health frame, because health and hygienic are closely related. The reason of one farmer is given below:

*“I take the calf out, and then away, as soon as possible. Also, because of the hygiene.”* – Farmer 3

Those quotes show that farmers give arguments related to hygiene, management, and health. According to Sørensen and Fraser a farmer focus in his initial positions on health and productivity (Sørensen & Fraser, 2010; Vanhonacker, et al, 2008). Separation included some practical issues. Some participants did not think the farmers would separate the cow and calf during the night or during his midday break. Looking at the practical way they thought that the farmer would separate them after the morning or evening milking. This shows that the management frame is used in the same way by different participants, namely the cow calf separation includes a management which should fit in the farmer daily practise.

Before calving, cows were brought in an individual or group calving pen. The farmers, which were using an individual calving pen, let their cows stay together with the calf between 8 and 24 hours. They placed the cow in this area as late as possible, so that it would stay clean until calving.

Therefore, it was easier to stop diseases. Again those arguments are connected with health frame (Sørensen & Fraser, 2010; Vanhonacker, et al., 2008).

Some participants explained that the individual calving pen would give the cow a calmer experience during calving. This can be seen in the next quotes:

*“If the cow and calf are peacefully together, then the cow gets easily ride from the afterbirth.”*  
– Farmer 5

*“I am quite aware of that the cattle which are calving in a group do not get stressed by be separated from the group. So if you have to separate them and calving in a single box you have to make it at the right time.”* – Advisor

Other farmers let their cow calve in a group calving pen. The cows would go to this group area at least a few days till three weeks before calving. The cows were placed in a group because a cow is a herd animal and they help each other. It was argued that the cow would get more stressed if she had to calve on her own. This is illustrated with the following quote:

*“When the calf is born it might be that the cow cannot stand up and that the calf is still in the membrane, then another cow will see it and she will help the calf.”* – Farmer 3

#### 4.1.2 SEPARATION AS NECESSARY BUT ALSO INCLUDING A DILEMMA

Like all mammals, a cow only gives milk when she gets a young. Therefore all participants agreed that separation was not a natural thing to do, but at the same time it was described as a necessity. Separating them meant not really meeting their needs, but the farmer had a milk production and therefore must have the milk. Several stakeholders agreed on that point, which can be seen in the following quote:

*“You have to carry out your production. You know it is stressful but you try to do it in a way as little stressful is possible, but you know you have to do it.”* – Government officer

Because separation is described as something necessary to do in a production, it is important to choose the best time to do it. This was explained as the time where the cow and calf encounter the least stress, as you have to separate them anyway.

Mixed arguments were found about what actually was the best time to separate them. Some participants focused on the benefits early in life, like that the calf received maternal licking, and it had the opportunity to nurse and get the colostrum. This can be understood as an issue frame by the farmers.

*“I think the exercise is nice when the cow licks the calf that is why I keep it there.”* – Farmer 6

Scientist 2 and a veterinarian mentioned long time benefits like the learning element. A calf will learn from his mother what it can eat or not, it learns the ‘cow language’, e.g. what different kind of facial expressions means. Those two participants have a different issue frame as the farmers had. These issue frames are contradicted the quote of the veterinarian is written below:

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*“The mother is learning the calf some language when you do this or this with your ears or your mouth or whatever, it means this and this and the calf will know that when she gets her own calf.” – Veterinarian*

Those two quotes show already a difference within the different phases of policy process. There is a different understanding in the problem definition. The problem is framed by the farmer as only benefits early in life, therefore early separation is needed. While the veterinarian and scientists frame the benefits when cow and calf will stay for a longer time period together. This suggests different issue frames. The biggest concern participants had of letting cow and calf together was the bond which would establish between them. The longer the cow and calf are together, the higher the response at separation. One of the arguments given by a participant is given underneath:

*“You know it is stressful for the calf and cow. Mostly for the cow because within the first few hours the calf is not that conscious so I think the maternal instinct is very strong for cows and heifers, so it is stressful for them to be separated.” – Government officer*

Some participants recalled that cows would call for their calf. Some farmers and the veterinarian stressed that when the cow is searching for her calf she forgets to eat, to drink, and to rest. At the same time the days after calving was described as very important – the cow must recover and not get a negative energy balance. That could result in using medical treatment to get the cow healthy again. This is another frame of the health, because now the focus is on the health of the cow. Another point from a participant was that the longer time they have to be together the more difficult it was to keep the calving pen clean enough. This could result in more disease transmission.

One scientist pointed to that it was strange that the focus was only on the discomfort of the cows. The positive aspect of cow-calf together is more difficult to describe:

*“At the same time you could hear when they are calling for each other but you cannot hear how good it is for them to be together. They are not running around and say sounds of joy, they normally are running around and saying sounds of frustration. And that is something we normally do not like to hear.” – Scientist 2*

Framing the issue is done in different ways by the stakeholders. The quotes show that some stakeholders focus on the negative sides of the issue, while other scientist focus on the improvement of the positive side of the problem. Again this shows a contradiction in the understanding of the problem in the policy process.

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#### 4.1.3 DIFFERENT PERCEPTIONS OF NATURALNESS

The participants used the notion naturalness and the meaning of naturalness in different ways, when they argued for cow-calf separation. For instance, it was said that in the nature the cow and calf would not have a bond, the calf only uses the mother as feeding system and therefore it is not so cruel to separate them. This is illustrated with two contradictory quotes:

*“In nature there is not this big bond between cow and calf, the only bond is that the calf looks at his or her mother as a kind of feeding station.” – Representative from dairy cooperation*

*“I think a lot of studies showing that in a natural flock for instance mothers and daughters still have a linkage to each other.” - Scientist 2*

There are also, in connection to naturalness, opposing arguments about calving in a group or not. Some said it was natural that she separated from the group to calve and therefore an individual calving pen made good sense for the cow. However, other stakeholders debated that the cow would be more stressed when she was taken away from the group. It was argued that in the nature they figured out themselves how to handle the calving, and therefore you should let them calve in a group. Again both opposing arguments can be read below:

*“If you look at the nature and you have 100 cows in the group then they will always go by themselves a few hours before calving. So that is natural.” – Veterinarian*

*“A cow will get more stressed when you take her away from the group instead of leaving her with the group. The cows will figure it out together, that is what they do in nature.” – Farmer 1*

Those counter quotes show that stakeholders have their own truth what is naturalness and in what way it is used. We call this phenomenon the ‘own truth frame’ which can be used by different stakeholders in different ways, because everyone has their own interpretation.

## 4.2 STORY ABOUT THE LEGISLATION

Some participants pointed out that there was no background information given about the specific legislation on cow-calf separation. The information that was described as available by some of the participants was referring to the report of the working group. In this report the new legislations were mentioned, when it should be implemented and what was the content of the rules. None of the farmers had read the report which was made by the working group or mentioned it as a source of information.

The analyse of the interviews showed that there was different understanding of why there has been a focus on cow-calf separation in the first place, how this legislation was made, what the underlying ideas were to make this legislation, how people managed and handled this legislation and why this legislation was seen as sub-optimal.

### 4.2.1 THE MAKING OF THE LEGISLATION

The participants varied in the explanation why there was a focus on this topic. The scientist, dairy cooperative and the advisor argued that this legislation was made because there were Danish legislation for poultry and pigs, but so far there had not been any welfare legislations for cows, except from the EU legislation about the minimum requirements for calves. Therefore a working group was created which should discuss all the topics related to the welfare of the cows in Denmark. This argumentation can be seen as an own truth frame why the legislation was made.

Another own truth frame was highlighted were problems with increasing mortality, lameness and mastitis in dairy cow production:

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*“There was a lot of publicity that mortality in dairy herd was increasing, less cows were going on grass during the summer time (...) if there are no problems then there is no need for a law, but that was not the case in the Danish dairy production anymore.”* – Representative from animal protection group 1

This quote shows the possible initial position of the animal protection group; this position has the focus on the care for the dairy cows. The veterinarian participant stressed that it was an on-going discussion if cows should go on pasture or not. And because of this discussion the government decided to make a working group which could discuss not only access to pasture but also all kind of topics related to dairy production. This is again another one truth frame.

Two scientists who were including in the working group talked about how they actually took part in making this legislation. This can be seen in the next quote:

*“Normally we started meetings with scientific presentation of the existing knowledge and we combine the scientific knowledge with the practical issues and then we went forward with the decisions.”* – Scientist 3

Both were saying that they based all the legislation on (international) scientific literature. The starting point was a big report made by research centrum Foulum, Aarhus University. This report, combining the scientific literature and the scientific knowledge of the group members, was the starting point of the legislation. This suggest that the scientists use their gained knowledge as frame of reference.

*“So you started and did all these things and one thing that came out was the cow-calf separation. I do not think that anyone would think of making a specific legislation about that.”*  
– Scientist 4

Those scientists had the same information gathering and use which helped them understanding the problem in the policy process. How the information is gathered will have an influence on the process, because what available information means and what is done with it can be framed differently.

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#### 4.2.2 UNDERLYING IDEAS WHY THIS LEGISLATION WAS MADE

The analyse shows that there was not any clear understanding or consensus of what was the reason behind making the legislation about cow-calf separation, and therefore different participants came up with their own ideas. Participants came with their own ideas linked to their frames of reference. It was depending on their values, norms, interest, knowledge and convictions how they framed the reasons. The representative from an animal protection group stated that they were not including in the working group, because the conclusion about this legislation was already there. If they would have been involved it would be hard to reach for the same conclusion as they did now, it was argued. This can be seen as his conviction of the frame of reference. He stated this without giving reasons and evidence.

One argument was that the legislation was made because of the pressure from the citizens. Beneath one quote is given, which illustrate this:

*“I think the cow and calf separation was more like the pressure for the people who are caring about the animals. It is not the farmers; it is not what they want.” – Journalist*

A scientist reasoned that citizens compared cow-calf separation as taking away the baby from the mother. A farmer said that lay people liked to have the romantic view, and therefore they wanted the cow and calf to stay longer together. This can be seen as an issue view.

The second idea from the participants was that the legislation was made because it could be positive for the farm-business. A farmer stated that this legislation might be good for the export. If you do something that is a bit better than the rest, then it is easier to sell your products. Another farmer and the dairy cooperation argued that this legislation could make it easier to sell the milk to the Danish consumers. This suggests that these participants frame the issue as good for business.

Some scientists stressed that this legislation was made less strict because otherwise the farmers could not handle it.

*“The whole idea is that if you put too much pressure on the Danish farmer he will cut down and go to the other countries even with more poor welfare.” – Scientist 3*

Another scientist claimed that the legislation was made, because the business did not have to control it for them self. Before farmers had different sub-standard condition which would harm the whole business. With this legislation all the farmers were equal, because they will be controlled on a national level.

Thirdly, most of the farmers thought that the legislation was made to maintain work for the governmental inspectors of animal welfare. Because of the crisis the numbers of farmers are going down, and therefore these new rules would give the opportunity for the inspectors of animal welfare legislation to keep working. The government made those legislations because otherwise they would become unemployment in this group. This own truth frame is shown by a quotation of farmer 1:

*“Instead of once or twice a year are those idiots now coming three or four times per year to say what I should do.” – Farmer 1*

Again, those reasons could also be seen as their own truth frame, the stakeholders made and believed their own truth why this legislation was made. Their truth is probably influenced by their convictions frames of references.

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#### 4.2.3 MANAGEMENT AND HANDLING OF THIS LEGISLATION

All interviewed farmers answered strait forward that they did not intend to implement the legislation. Two quotes illustrate this:

*“I will tell them (the inspectors) that they (the calves) are all born yesterday.” – Farmer 6*

*“You will be doing that the day they come to inspect you That is the way farming is today in Denmark, we write what people want to read and we do what people want to hear. But normally we do not do it.” – Farmer 7*

Will the cow and her calf be together in the future?

The farmers found a way in handling the legislation by saying that they were working on implementing the legislation, but the implementation only will become real the day the inspector is at the farm to check for compliance/non-compliance. During inspection the farmers argued that they would let the calf stay together with the cow till the inspector had left. If the inspector would arrive unannounced then they would say that the cow calved too early, and therefore they were not placed in an individual calving pen. One of the arguments is seen here:

*“I will make individual calving pens, but just to use when they come and check me. I do not want to use them. I just want more space.” – Farmer 6*

Also some other participants debated that farmers handled this legislation by only saying that they intend to implement it:

*“We can only ask the farmers if they are doing it, but of course they will say yes.” – Representative from dairy cooperative*

We will call this phenomenon the ‘say-what-they-want-to-hear frame’. Different stakeholders thought that the farmers will not implement the legislation, but they will only say it. This frame can be seen as one of the solution frames. The say-what-they-want-to-hear frame indicates that the farmers are not open-minded and they have a low availability of cognitions. This suggests that they are conforming in activities of interaction. They will not change their frames, and the frames they have can be seen as frozen frames. This means that it will be difficult to see other solution frames beside the say-what-they-want-to-hear frame.

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#### 4.2.4 THE SUB-OPTIMAL LEGISLATION

Different participants gave reasons why this legislation was not seen as optimal. They said that it was not optimal or sub-optimal because inspections are not possible, the legislation was a compromise, it did not improve animal welfare, the times after the legislation had changes, the focus was on something else like cows on pasture and the explanation how to implement it is blurred.

All the participants, except for the two animal welfare protection groups who did not mention this point, thought that it was impossible to control if the cow and calf were together for 12 hours. One argument is given below:

*“I think a lot of farmers think that you cannot control it, and therefore they are not going to change it (...). Nobody can see when a cow has given birth. If they want to control it then they should stay in the stable for at least one day (...) if a farmer knows about this 12 hours’ legislation, then he will just count back” – Farmer 4*

Three participants who were involved in the working group said that they did not discuss how they could control this in the working group.

*“I do not think we discussed it, that is more lawmakers who discuss if they should get a fine.” – Scientist 3*

The veterinarian argued that he would like to hear from the authorities how they would do the inspection, because then he could talk with the farmers about that. The government officer admitted

in the interview that it would be difficult to control this specific legislation. Therefore she would like to have a discussion with the farmers to make sure they would implement this legislation. These reasons are related with barriers which are intrinsic and extrinsic driven. Ellis-Iversen and colleagues displays in knowledge, skills and ability the lack of available knowledge of control measures (Ellis-Iversen, et al., 2010). And belief in self-efficacy shows that a barrier is if it is not possible to control on farm.

Another point why the legislation was seen as sub-optimal might be because this legislation was the result of a compromise. One representative from an animal protection group said several times it was a compromise with respect to animal welfare. Some scientist noticed that this compromise was strategic:

*“Most people want to take a unanimous decision based on a compromise because then they could have influence on the decision, because we know if we gave a split decision to the politicians then anything could happen, because they could choose - Scientist 3*

Other respondents argued that this was a compromise with regards to another legislation which was made at the same time. It was a kind of a trade off by saying ‘we are doing something good here, so we can make something bad here’. This is illustrated with a quote below:

*“They (the farmers’ organisation) accepted other things, just to get rid of the legislation that cows should go on pasture.” – Representative from farmers’ organisation*

Making a compromise can be seen as negotiating process whereby the pie is divided instead of making together a new one. This shows that the process was distributive.

Another point why this legislation was not described as the best legislation, were because the focus was especially on the cows on pasture legislation. Therefore the cow-calf separation legislation came second. This is shown in the quote below:

*“It was not in that sense controversial as the other once were. The big conflict that time was pasture, whether they should mandatory on pasture for cows.” – Scientists 4*

This legislation was made to improve the animal welfare of dairy cattle, but some participants argued that it would not improve the animal welfare. They thought it would increase the risk of disease and the cow will get more stressed.

*“It is more the idea that people think that this legislation is good for cow and calf then it actually is good for cow and calf.” – Farmer 4*

A fourth point was that the legislation was made in 2009, Therefore after that the dairy production went into a very serious crisis from which they have still not recovered. Therefore some scientists, veterinarian, government officer, journalist, representative from animal protection group and a farmer argued that times have changed since then. Because the times have changed it is hard for the farmers to implement the legislation without money. Two quotes are given underneath:

*“It was a good time for dairy farming when the law was passed through and was made.” – Journalist*

Will the cow and her calf be together in the future?

*“Of course the legislation was made mostly during the good times. And now there is very bad times and farmers just do not have that much, it is very very difficult to make new investments.” – Scientist 4*

Money can be a barrier for not implementing this legislation. It could be a financial barrier and it also fit in the extrinsic barriers regarding to the community and industry, because there is no financial gain from implementation. Those barriers made the stakeholders frame this legislation with the ‘wait-and-see frame’ which can be seen as another solution frame. The stakeholders will wait and see what the future will bring.

Some participants argued that there is a lack of clear answers from the literature about the biological background for making this legislation. Research was a bit vague what the best time to separate cow and calf was. Two participants said that they could not remember why they picked the 12 hours instead of the 24 hours which was already implemented by the organic farmers:

*“It has been studied but as I see with no quite clear conclusions.” – Government officer*

*“In a way it is strange that we did not ask for 24 hours, as it is in organic production. But I cannot remember why.” – Representative from animal protection group 1*

This is contradictory with the gathering of the information to understand the problem and planning and decision-making to select the different options.

Finally, participants gave different knowledge reasons about the number of hours’ cow-calf should stay together and the use of the individual calving pens. An argument from a scientist related to the findings in scientific literature:

*“(Literature shows that...) There is no difference between 6 hours, 12 hours and 24 hours but when they have been together for more than 24 hours then they show a strong response.” – Scientist 1*

Participants argued that the individual calving pen was good for behavioural and health reasons. The cow can seek isolation and the calf is protected from pathogens. In a group miss mothering can exist and failure of passing transfer through the colostrum. Another scientist argued that the cost of making an individual calving pen are not that high and therefore it is doable for the farmer to make one. These scientists do not see barriers to implement the individual calving pen, we will call this the ‘no-barrier frame’.

#### 4.3 REASONS OF RESISTANCE AND NON-RESISTANCE

The participants came with a broad spectrum of reasons why they would not implement the legislation or why they thought farmers would not implement this legislation.

However, sometimes farmers simply expressed that they did not intend to implement the law, without telling why. This resistance can be seen as motivational frames. A few quotes are written down to give an expression of their lack of argumentation:

*“I do not think it is an option to implement it.” – Farmer 2*

*“It will take a while before I will change things here, I can tell you.” – Farmer 3*

*“Not 12 hours, never!” – Farmer 6*

*“I am not making those individual calving pens.” – Farmer 7*

But there are also reasons with argumentation. Three sub-themes were found, namely: Lack of explanation, lack of understanding, no money to change and non- resistance.

#### 4.3.1 LACK OF EXPLANATION

Participants gave different reasons why they have resistance regarding to this legislation. When talking about lack of explanation it is not clear what the consequences are. There is resistance because of the amount of legislation, and farmers argue that they do not want to hear about this law. Those arguments can be seen as motivational frames, because those arguments will have a (negative) influence on the implementation of this legislation.

Farmers and the veterinarian reasoned that they would not implement the legislation until the consequences are known. There is no information available how and when the inspectors will control this legislation. Again this can be understood as the ‘wait-and-see frame’, stakeholders will wait and see what will happen between now and 2024. This is shown in the quotes beneath:

*“Some farmers will make some changes when the controls will start.” – Farmer 4*

*“If there are not consequences then the farmer would say why should I? We have to know about the consequences.” – Veterinarian*

The cow-calf separation legislation was made together with a whole package of legislations; therefore some farmers claimed that they would not implement this legislation, because there are too many legislations which they should implement. One farmer said that there are so many legislations that it is impossible to read them all.

*“There are too many laws and regulations. I am independent but the path is so narrow. It is not possible. Every day I am doing wrong. (...) Too many cows; cows on the wrong farm; I forgot to open the window for the calves; sometimes they stay too long or too short. And then there are mistakes from the people who work here. I go on the wrong side every day.” – Farmer 6*

The veterinarian and some farmers stressed that they simply did not want to hear about this legislation. They did not want to hear about it, because this was not their main problem right now. One farmer argued that he was not interested in this legislation, because he saw it as a wrong legislation. Another farmer said that he just did not want to hear about it, because he did not want worry about it. He had other things to do. Two quotes are given as illustration:

*“I have other things to do. I do not want to worry about such things, I even get angry if I immerse myself into this topic.” - Farmer 3*

*“I do not know any farmers who want to discuss this topic with me.” – Farmer 5*

Will the cow and her calf be together in the future?

Termeer (2009) gave five barriers of adopting new legislation. One of those five might be important, namely: conflicting conviction concerning good policymaking. The farmers argued that they thought that this legislation was wrong or not important enough. This shows a difference in the agenda of the policy makers and the farmers. This difference has an influence on good policy making.

The veterinarian claimed that the way you inform the farmers is important. If you inform them in a wrong way than they will not listen.

*“They are working with cows for many years, so they know what they can do with cows. I can sell it with academic words but they will not hear it. They are more focused on practical advantages that make an investment easier.”* – Veterinarian

This quote touches on the different typologies of actors’ communication in interaction. According to Van Woerkum and Aarts (2008) there are four communication activities, namely: exploring, informing, relating to others, and negotiating. The veterinarian only talked about informing, but there are more communication activities which could take place. In this case there was no communication at all with the farmers.

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#### 4.3.2 LACK OF UNDERSTANDING

Another sub-theme was a lack of understanding. Some participants did not see how it could work in practice; they also did not understand why you would change something that in their opinion is working well. Among farmers there were an overall lack of understanding.

Both participants and farmers thought that it was hard to handle this legislation in practice. Some said that they were worried about the disease transmission, the higher amount of dead calves, and that the farmer should share the milk with the calves. This can be seen in the quote below:

*“Keeping cow and calf together for longer or sharing the milk with the calf is for the farmer really absurd, they cannot see how it should work in practice.”* – Representative from animal protection group 1

Farmers did not understand why they should change something if the way they are working right now is working well. One farmer expressed that you never should change a winning team:

*“Why should we change our way of handling when it is working well? (...) We always did it this way and it works. Why should we change that? Because someone else think that we should change it?”* – Farmer 2

Some participants did not understand why this legislation was made, what the reasons behind it were. One scientist said that if it is not clear why legislation is made, and then it is hard to implement it.

*“If we think it is just annoying because someone just put down a law on us. Then you can make whatever law you want, but it will not be a really success.”* – Scientists 2

Those reasons can be seen as extrinsic barriers in which a trusted source of information is missing. Again when important information is not communicated towards the farmers, it will be a barrier.

### 4.3.3 NO MONEY TO CHANGE

To implement these legislation farmers should make individual calving pens, but participants noticed that because of the crisis it was hard to do new investment. Farmers told that they did not have money to make these changes; they preferred to wait till the economy in the dairy sector will improve. Different participants had different arguments which are put below:

*“There is no money, so no discussion.”* – Veterinarian

*“When they have this law they need to build smaller boxes for the cows and calves and they do not have that money in the moment so they are trying to get along with it.”* – Journalist

*“I need to build something new but now I need to survive so I do not build anything.”* – Farmer 5

Those quotes illustrate the financial barrier. Different stakeholders argue that the financial barrier will have a big influence on the implementation of the new legislation.

### 4.3.4 NO RESISTANCE

There was one farmer who did not have any resistance against the separation after 12 hours. He already had his cow and calf together for at least 24 hours till 36 hours. He said that he as a farmer is always ready to make changes. He argued that if people thought, it was good then you make it. This is illustrated by the quote below:

*“We have some years (as a transition period) and then you are thinking about it some years before. And then you found a way to handle it. So it is not a big problem.”* – Farmer 7

## 4.4 VERBAL WAR

After the legislation was made, it should be communicated towards the involved stakeholder. The communication between the different stakeholders was not always as good as it should be. Verbal war refers to the tensions between the different stakeholders on communication level. There was the typology of actors’ activities in interaction and communication in interaction. The activities and the communication in interaction can be divided in four different categories. Activities can be divided in: conforming, bureaucratizing, creating and innovating. Communication can be divided in: exploring, informing, relating to others, and negotiating. In this chapter the focus will be on the sub-theme; who is informing the farmers. There is sub-theme which is called ‘undervalued farmers’. In this chapter it is explained how farmers see the process of the legislation making. And last the sub-theme making stereotypes about involved stakeholders will be mentioned.

### 4.4.1 WHO IS INFORMING THE FARMERS?

The farmers were informed in different ways. They read about the legislation, they heard about it during meetings, they talked with different people about it, or they were not informed.

Different farmer’s magazines and newspapers wrote about the legislation. This suggests that farmers use exploring as basic activity. They read the newspaper to explore their environment – how do

Will the cow and her calf be together in the future?

other stakeholders frame this legislation. This can be seen as a passive or one way of exploring the environment, because the other stakeholders are not exploring the views of the farmers. One farmer said that it was not fair when they wrote about this legislation in the national newspaper, because he thought that they always write biased. It is really easy to let lay people think that cow and calf should stay longer together.

*“It seems nice to let cow and calf together, but they forget to tell that they separate them after 4 days or 12 hours or whatever. But they do not tell the lay people that the cow is calling for her calf for 3 days. They only show one side of the story, but they never show the effects.”*  
– Farmer 3

This quote shows that the farmer himself has a conforming way of looking at the legislation. This means that he isn't open-minded and he has no availability of cognitions. He thinks that the journalist also has a conforming view, which will result in only explaining their frozen frames. Farmers, journalists, advisor and a scientist said that they wrote and read a lot about the new legislations in the farmer's magazines. Normally the articles were about the total amount of new legislation whereby the cow-calf separation was only a small part of it. One of the scientist told that he wrote an article where he took the entire conclusion from the report and translated in an easy language which the farmers could understand. The journalist told that there were articles which gave information but also where they gave advise towards the farmers.

*“They gave some examples from different stables how they get along with it. The farmers got inspired to do something on their own.”* - Journalist

During meetings farmers were informed about the new legislation which were made in total “Arbejdsgruppen om hold af malkekvæg” (working-group on the husbandry conditions for of dairy cattle). There was a hearing on a yearly conference where the working group presented all the coming rules, and farmers could comment on it. One farmer said that it was necessary to go to such meeting, otherwise you will not hear about it. An advisor told that the meetings had different sizes, if a meeting was small then there was room for discussion. It would be expected that such meeting the availability of cognitions and open-mindedness would be high, which would result in the innovating category. But during the larger meetings it was only one-way communication. This suggests that during large meetings again conforming will take place, because there is no room for discussion. In smaller meetings, where discussion can take place, it could be that the interaction will take place in the bureaucratizing category. Stakeholders are bureaucrats when they are less open-mindedness but they have more availability of cognitions. This makes them know about the possible frames, but in interaction they are not willing to recognise or accept them (Aarts & Van Woerkum, 2006)

The farmers' organisation reasoned that they did not communicate about the specific cow-calf legislation with farmers, because it was difficult to fulfil this legislation. Beneath one reason is given:

*“We have not communicated that specifically because of course the issue it is quite difficult for all farmers to fulfil due to their already built barns. Of course we have communicated that specifically: we communicated that it is okay that the farmers cannot have the cow and calf go together for 12 hours. It is okay if they are together maybe for only 8 or 6.”* – Representative from farmers' organisation

The farmers' organisation communicated through their homepage. The government officer told that they had a meeting with the farmers' organisation. She claimed that the farmers' organisation had the task to inform their members.

The advisor and the veterinarian were the only two who told that they talked with the farmers in person. The advisor told that he informed the farmers about the importance of individual calving pens. This is shown below:

*"I would prefer to have a talk with the farmer and ask if you want to get rid of your disease you need to have single boxes, that is the best for the cow and calf."* – Advisor

The veterinarian thought as well that it was his responsibility to inform the farmers about the new legislation.

*"I am the one who has the closed contact with the farmers. So I have better chance to influence the farmers over time, because I am visiting them more often. That is mine special responsibility. We have a lot of discussion about communication topics with farmers. Of course I can influence them."* – Veterinarian

Some farmers had discussions with their veterinarian about this topic. One farmer said that the veterinarian must inform about the legislation because of the risk for inspection. He told that the inspector from the government would ask him if his veterinarian told him about this legislation. If the veterinarian did not tell anything in relation to this legislation, then he had a problem. Some farmers claimed that the veterinarian never informed them about the legislation. They did not interfere about the new legislation. But another farmer said that his veterinarian told him about the legislation, because they normally are informed about the rules.

Participants also suggested other ways to inform the farmers about new legislations. Farmers thought that it would be the best if the veterinarian or the inspector would tell them what they should change and why. One scientist thought that the advisor or the veterinarian would be the best person to inform the farmers, because they have the most contact with the farmers. The government officer and the scientist both thought it is most important to have discussion and talks with the farmers instead of forcing them to implement a legislation. This is illustrated with a quote of the scientist:

*"The close contact between advisors and farmers today in these health advisory services gives a good environment for both of them to raise issues and to talk about it and ask questions and to get a mutual understanding."* – Scientist 2

All those quotes are related with the types of communication in interaction. A lot of communication between the different stakeholders is lacking, they do not communicate at all. The stakeholders who communicate with the farmers only inform the farmers. The farmers are not involved in the negotiating process. Almost none of the stakeholders are trying to improve their relating to others modality.

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#### 4.4.2 UNDERVALUED FARMERS

The interviewed farmers had the feeling that they were undervalued in the process. They argued that the people who made the legislation did not ask the farmers. These people from the working group did not listen to the farmers and last that the people from the working listen only to other stakeholders. This proposes the presence of a conflict frame.

Farmers said that they had the feeling that the working group forgot to ask the farmers what they thought about it. This suggests that there was a lack of communication between the working group and the farmers. They maintained that a farmer would know what is best for his cow.

*“I do not think it is that hard, they only need to ask the right people. Who the right people are, I do not know, but I think that it is the people who work all day with the cows.” – Farmer 3*

Farmers also argued that the people who made this law did not listen to farmers. They had the feeling that they were not taken serious. They claim that their organisation did not do enough to avoid this legislation. Beside a conflict frame this can also be seen as the feeling ignored frame. Three quotations are given underneath:

*“They do not listen to me, because they think I am only interested in profit. I only want more money money money.” – Farmer 6*

*“The farmers’ organisation already decided it, and if you want to say something then you should prepare your argument very well, otherwise they are laughing at you.” – Farmer 1*

*“Our strongest organisation did not do enough. Kvæg and Landbrugsinfo did not enough to avoid the legislation” – Farmer 1*

Beside the farmer’s other professionals like veterinarians and scientists, have knowledge about dairy cows, but the farmers think that you cannot compare their knowledge with the practical knowledge of a farmer. They thought that people only listen to scientists or the people who did their study about dairy cows instead of listen to the farmer. The reason of one farmer is given below:

*“The scientist may know things we do not know, but it also works the other way around. You should not flatten the practice.” – Farmer 3*

In this section a knowledge frame is used. The professionals and the farmers gathered their knowledge in a different way. The farmers learned most during practise while the professionals learned by following a study. The farmers did not feel that their knowledge was seen equivalent with the knowledge of the professionals. This results in the feeling that they were not seen as equal, which can be seen as the feeling ignored frame.

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#### 4.4.3 MAKING STEREOTYPES ABOUT INVOLVED STAKEHOLDERS

During the interviews a lot of the participants said something about someone else. The scientist and the representative from dairy cooperative discussed that lay people thought it was not good to separate cow and calf. It is difficult to explain to them why they should be separated. The scientist and representative from dairy cooperative thought that the lay people would see it as separating a child from father and mother.

*“We separate them, of course a lot of consumers think this is not good and even cruel for cow and calf.” – Representative from dairy cooperative*

The veterinarians were stereotyped by a scientist that they were not very helpful when you want to explain legislation towards a farmer. The scientist thought that there was often a general scepticism among veterinarians about the colostrum intake. The scientist thought that the veterinarian would prefer a colostrum intake of four litres by tube-feeding instead of drinking from the cow.

One farmer quoted that a lot of farmers were dissatisfied with the farmer’s organisation:

*“The farmer’s organisation did too little, too little. A lot of farmers are dissatisfied about the way they handled. Our farmers organisation did too less when the legislation was made” – Farmer 1*

Farmers had a lot of things to say about the people who made the legislation. They contended that this group of people never worked with dairy cows, they confuse cows with pet animals instead of production animals. One of those quotations is written below:

*“I think these people who make the laws do not really know what is happening. Or how the cow is working.” – Farmer 7*

The farmers claimed that the people, who made the law, were making the law behind their desk without thinking of the practise. Some farmers argued that they would like to invite the ‘desk people’ to work on the farm for some weeks. This is called the ‘desk people frame’, which indicates the belief of inexperience farmers have about the people who made the legislation. They hoped that the desk people got to know the practise in this way. This can be seen in the next quotes:

*“The other one is just sitting behind their desk, at 17:00 he switches off this computer and goes home. But we work day and night with the cows.” – Farmer 2*

*“They are not from the practical, they only look and say that is good for the cow. They think it is like the Donald Duck paper and then they make the law. They make the cows human, but they are not humans.” – Farmer 6*

Another farmer thought that the people who made the law have forgotten that the farmers also need to make a living of farming. He argued that they do the best they can to make a good life for the cows, but they also need to make money out of it.

Two farmers were stereotyping farmers’ organisation thinking that the farmers’ organisation did not help them enough. They argued that a lot of farmers are not happy with the way they handled. One farmer even said that they are working in the wrong direction. The advisor thought that it was the problem that the stakeholders see the other one as the bad guy. This is illustrated with the following quote:

*“The farmer thinks that the controller is a bad guy and the controller think that the farmer is a bad guy. But in fact they have the same goal in the end.” – Advisor*

Will the cow and her calf be together in the future?

This quote illustrates the ‘bad guy frame’. The bad guy frame is an important frame which shows the distinction between different stakeholders working on the same goal, namely: improvement of the animal welfare.

#### 4.5 SUMMARY RESULTS

Most of the results could be linked with the used theories. In table 4 the different theories are subdivided in the different phases of policy process. Within each theory or frame different reasons by stakeholders are given.

Table 4: summer of the results

Understanding	Planning and decision-making	Managing the problem
<i>Important factors of Understanding: Possible initial positions, own truth frame, health frame, typology of actors’ activities in interaction, frames of reference, issue frames.</i>	<i>Important factors of planning and decision-making: Feeling ignored frame, possible barriers for implementing new legislation, desk people frame, bad guys frame, management frames, and motivational frames.</i>	<i>Important factors of managing the problem: Typology of actors’ communication in interaction, wait-and-see frame, say-what-they-want-to-hear frame, conflict frame.</i>
<p><i>Possible initial positions</i></p> <ul style="list-style-type: none"> <li>- Farmers: health and production</li> <li>- Animal protection group: care for dairy cows</li> </ul>	<p><i>Feeling ignored frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: felt not involved in the process and they felt ignored by the farmer’s organisation.</li> </ul>	<p><i>Typology of actors’ communication in interaction</i></p> <ul style="list-style-type: none"> <li>- Working group: distributive negotiation</li> <li>- Farmers organisation, government: informing the farmers through media</li> <li>- Veterinarian, advisor: informing the farmers face-to-face</li> <li>- Farmers: not involved in the negotiation process. Exploring by reading newspapers.</li> <li>- Scientists, animal protection group, journalist: no communication with farmers</li> </ul>
<p><i>Own truth frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: cow get stressed when separate her from the group. Legislation was made to maintain work for governmental inspectors.</li> <li>- Veterinarian: natural for cow to separate herself from cow when calving. Discussion about cows on pasture, therefore working group made to discuss all dairy cow topics.</li> <li>- Scientist: cow and calf have linkage in nature</li> <li>- Dairy cooperation: cow and calf have no linkage in nature</li> <li>- Scientists, dairy cooperative, advisor: legislation was made because no animal welfare legislation for dairy was available</li> <li>- Animal protection group:</li> </ul>	<p><i>Possible barriers for implementing new legislation</i></p> <ul style="list-style-type: none"> <li>- Farmers: intrinsic, belief in self-efficacy; not possible to control on farm. Conflicting conviction concerning good policy making</li> <li>- Government, farmers: Extrinsic, knowledge, skills and ability; lack of available knowledge of control measures.</li> <li>- Scientists, veterinarian, journalist, government, farmers, animal protection group: extrinsic, community and industry; no financial gain from implementation. Financial barrier</li> <li>- Scientist: no-barrier frame</li> <li>- Animal protection group, farmer, scientist: extrinsic, knowledge, skills and ability; no trusted source of information</li> </ul>	
		<p><i>Wait-and-see frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: wait and see how the crisis will develop and how controls will be done.</li> <li>- Veterinarian: has to know the consequence before a farmer will implement it</li> </ul>

<p>increasing mortality, lameness and mastitis in dairy cow production</p>	<p><i>Desk people frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: professionals do not know anything from the practise.</li> </ul>	<p><i>Say-what-they-want-to-hear frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: say that they are implementing the legislation</li> <li>- Dairy cooperative: if you ask if the farmer is implementing the legislation, they will say yes</li> </ul>
<p><i>Health frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: calf health, enough colostrum, cow lick the calf, cow health</li> <li>- Veterinarian: cow health, too stressed forget to eat.</li> </ul>	<p><i>Bad guys frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: inspectors are only working against the farmers.</li> </ul>	<p><i>Conflict frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: conflict with working group, because farmers' felt excluded and ignored. Conflict with farmers' organization, because they already decided without informing or including the farmers.</li> <li>- Scientist: conflict with veterinarians, because they did not inform the farmers in the right way.</li> </ul>
<p><i>Typology of actors' activities in interaction</i></p> <ul style="list-style-type: none"> <li>- Farmers: conforming, they will not implement the legislation they frame it as negative</li> <li>- Large meetings: conforming, no room for discussion</li> <li>- Small meetings, bureaucratizing, room for discussion</li> </ul>	<p><i>Motivational frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: not letting cow and calf 12 hours together. Not making individual calving pens. Too many legislations to implement. It is a wrong legislation.</li> <li>- Veterinarian, farmers: not implementing legislation until consequences are known. The legislation is not the main issue</li> </ul>	
<p><i>Frames of reference</i></p> <ul style="list-style-type: none"> <li>- Scientists: knowledge, gathering scientific information. Conviction, le legislation was good for business</li> <li>- Animal protection group: conviction, were not included because the conclusion was already there.</li> <li>- Journalist: conviction, legislation was made because of pressure from citizens</li> </ul>	<p><i>Management frame</i></p> <ul style="list-style-type: none"> <li>- Farmer: separation after milking</li> <li>- Other participants: no separation during farmer's night or midday break.</li> </ul>	
<p><i>Issue frame</i></p> <ul style="list-style-type: none"> <li>- Farmers: separation as early as possible, learned from practise</li> <li>- Veterinarian, scientists: long time benefits when separating later in life, learned from science</li> <li>- Scientist, dairy cooperation, farmer: legislation good for business</li> </ul>		

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## 5. DISCUSSION

The aim of this thesis is to get a clear and broader picture of the legislation on cow-calf separation in Denmark. Interviews with relevant stakeholders were held to get an insight in their views and frames.

In this chapter different aspects will be examined. First the main findings in relation to research questions are outlined. Second a reflection on the findings is done. Subsequently the results are linked with the practice to see if it is possible to use these findings in practice. Also the limitation of the research is debated and lastly a recommendation is given for future research.

### 5.1 MAIN FINDINGS IN RELATION TO RESEARCH QUESTIONS

To get a good impression of the results which were found in the analysis the four sub-research questions are answered one at a time. Afterwards the findings are connected to the previous theories. A few new theories were added to explain some unexpected results.

#### 5.1.1 WHAT WAS THE REASON FOR MAKING THE COW-CALF SEPARATION LEGISLATION IN DENMARK?

Looking at the results it suggests that it is still not clear to all stakeholders what the precise reason was for the legislation about cow-calf separation in Denmark. They all gave different reasons and have different beliefs. They also do not know why cow and calf should be kept together for the first 12 hours. The participants also did not have a shared belief on why the cow should give birth in an individual calving pen. All stakeholders had their motivational frame, own truth frame, and they reasoned from their own frames of reference. This indicates a failure in going through the understanding phase of the policy process. Going through the understanding phase can be more successful by improving the communication and transparency within the different stakeholders.

#### 5.1.2 WHAT FRAMES DID DANISH STAKEHOLDERS HAVE ABOUT ISSUES AND INVOLVED STAKEHOLDERS IN THE COW-CALF SEPARATION CASE?

Regarding the results different frames were found, which were used in different phases of the policy process. In the understanding phase; own truth frame, health frame, frames of reference, and issue frames were used to get a better understanding of why the legislation was made. In this phase the different frames show a wide spread variation within the different stakeholders – they all give different explanation and focus to clarify their understanding of the policy process. Feeling ignored frame, desk people frame, bad guys frame, management frame, motivational frames and different barriers were used in the second phase: planning and decision-making. In this phase the developing options, option assessment and selection of options were influenced by these frames. Feeling ignored, desk people and bad guys frame were used by the farmers to explain how they saw the developing of the legislation. Stakeholders used different barrier to frame how they saw the legislation. Lastly managing the problem was influenced by the wait and see frame, the say what they want to hear frame, and conflict frame. This shows different views on how farmers will manage and not implement the legislation.

### 5.1.3 HOW DID DANISH STAKEHOLDERS COMMUNICATE WITH EACH OTHER DURING AND AFTER THE PROCESS COW-CALF SEPARATION LEGISLATION?

During the whole process there was a lack of communication between the different stakeholders. During the making of the legislation the working group negotiated. The negotiation was distributive, which means that the working group searched for a shared goal, which might not be the best goal for all stakeholders. Within this negotiation farmers were not involved personally, but they were represented by their farmer's organisation. However, they felt not represented by their organisation. The veterinarians and advisors informed the farmers directly, face-to-face. But none of the other communication modalities in interactions were used to communicate with the farmers. The farmers heard that they have to implement this cow-calf separation legislation but not why. This made farmers low in open-mindedness and low in availability of cognitions; conforming. When meetings were organised it was depending on the size if there was room for discussion. With large meeting again conforming took place, but with small meeting bureaucratizing could take place while other possible frames could be discussed.

### 5.1.4 WHAT WERE THE FRAMES OF DIFFERENT STAKEHOLDERS IN PREPARATION PHASES AND THE IMPLEMENTATION OF THE LEGISLATION?

As seen in the results, the working group assumed that the farmers would implement the legislation. They did not discuss how to enforce and how inspectors could control this legislation. They thought that the farmers would implement this legislation even without explaining the farmers why they should implement it. This is while farmers gave a lot of different reasons for why the legislation is not optimal, namely: Inspection is not possible, the legislation was a compromise, it did not improve animal welfare, the times after the legislation have changed because of the crisis, the focus was on something else and the explanation on how to implement it is blurred. There are too many barriers for the farmers and other stakeholders to overcome. This together made the decision for the farmers not to implement the legislation. The farmers used the wait-and-see frame together with the say-what-they-want-to-hear frame. The implementation might be different if the overcoming barriers were somewhat reduced.

## 5.2 REFLECTION ON FINDINGS

In this sub-chapter the research question is answered by analysing the results. Reading the results already gave a broad insight in the variety of different findings. In this chapter the findings are divided in three phases of the policy process, namely: understanding, planning and decision-making and managing the problem.

### 5.2.1 UNDERSTANDING

In the first phase of the policy process, problem detection and initial framing, information gathering and use, and problem definition are central. However, not all steps are taken in the right order.

Firstly, it is noticeable that farmers do not know why the legislation was made in the first place. This suggests already that there is a lack in problem detection and initial framing. When things are unclear people start guessing. Because of this guessing farmers and other stakeholders came up with

a variety of reasons why this legislation was made. The own truth frame suggested a broad variation among different stakeholders. Farmers thought that the legislation was made to maintain work for the inspectors, veterinarian thought that the legislation was prepared to avoid regulations that made grazing compulsory, animal protection group had their own truth that the legislation was made because lameness, mortality and mastitis had increased, and last scientists, dairy cooperative and advisor framed that none animal welfare legislation was available in Denmark for the dairy cattle and therefore this legislation was prepared. This variation will be less if the working group had communicated this reason clearly towards farmers and other involved stakeholders.

Secondly, it is not clear why cow and calf should be together for the first 12 hours. Cow and calf need to be separated at a certain point, because the farmer needs the milk. The stakeholders need to search for a balance whereby the positive aspects are still high and the negative aspects are not that high. The scientists mentioned that they drew a line themselves, because the literature did not give a clear answer. They did not discuss alternatives which suggests that they did not reach the innovating typology of actors' activities in interaction (Aarts & Van Woerkum, 2006). Another view mentioned that this legislation was a compromise. The working group made a lot of legislations all related to dairy production. During those meetings some suggestions for new legislation led to discussion between the different stakeholders. Those stakeholders strategically gave and took during those meetings. Some stakeholders, including the farmer's organisation, stated that they did not want it to be obligated that cows go on pasture during summer. Because a compromise needed to be made, stakeholders settled with not obligating cows to go outside in the summer. In exchange for the calves which would have to stay with the cow for the first 12 hours. Both the lack of research that supports the exact 12 hours and the compromising during the negotiation, suggest an incorrect use and gathering of information. The lack of a trusted source of information is described as an extrinsic barrier from knowledge, skills and ability (Ellis-Iversen, et al., 2010). The lack of a trusted source caused ambiguities in reasons why the legislation was made.

The working group thought that the animal welfare would improve if the cow and calf should be longer together. To solve this issue, they made this legislation which obligated farmers to have cow and calf together for at least 12 hours. This problem definition is inexplicable towards people who did not take part in the working group, because no one can explain why cow and calf should be together for at least 12 hours. This was also an issue for the farmer's organisation, because they could not explain why this legislation was made towards their farmers. They could not explain or communicated this well because of the compromise they made. This made the farmers feel that they were not represented by their organisation, because farmers did not want both of those new legislation, cows obligated on pasture and separation after 12 hours.

The lack of explanation resulted in "own truth frame". Besides, people argue with their frames of reference when things are not clear (Te Velde, et al, 2002). Everyone had their own convictions and made their own assumptions. They took other information for granted, this lead to the cow-calf separation legislation (Te Velde, et al., 2002). This suggests a lack of communication or clear explanation. If the reasons were communicated better the ideas would have had less variation.

If a farmer understands why it is better for the cow or calf – for instance in relation to their behaviour and perhaps connected to financial benefit, the chance would be higher that it would implement it. According to Dockès and Kling-Eveillard farmers place the animal at the heart of their

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work (Dockès & Kling-Eveillard, 2006). This suggests how important it is to give the farmers more information on what effects this legislation will have on their business and thus cows. This should be done with good transparent communication. However, the farmer's organisation did not actively communicate with the farmers about the compromise or the legislation. Policymaking is compromising but here it blurred things up, which made it difficult to communicate transparent.

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### 5.2.2 PLANNING AND DECISION-MAKING

In this phase three things are important, namely: developing options, option assessment and the selection of options. When working on planning and decision-making different barriers can pop-up. This was also the case in the cow-calf separation legislation. Those barriers made it difficult to implement the legislation.

Firstly, farmers stated that the people from the working group did not know anything about the practice, farmers called them 'desk people'. This suggests a lack of trust from the farmers in the people who made the legislation including the farmer's organisation, which is an important barrier. According to Lindgreen (2003) trust is defined as: "willingness to rely on an exchange partner in whom one has confidence". Palmer and colleagues demonstrate that the farmers have a lack of trust towards the government (Palmer, Fozdar, & Sully, 2009). But there are different types of trust, namely: generalized trust, system trust, process-based trust and personality-based trust (Lindgreen, 2003). Generalized trust is the belief in people, which are part of your moral community (Uslaner, 2008). System trust is written down in rules and is controlled by governmental and controlling institutions. This trust is based on how these institutes make the law and how they enforce them (Lindgreen, 2003). Process-based trust is a trust that develops through repeated interactions between people. The trust is based on the history and the interactions. The last type of trust is the personality-based trust; this shows when someone is willing to trust a partner (Lindgreen, 2003).

Looking at the different types of trust, it is clear that the farmers have a lack of system and personality-based trust. The farmers felt not represented by their farmer's organisation. This suggests that they do not trust their partner. Looking at the system trust, the farmers felt that they were not asked about their opinions, that people from the working group did not listen to the farmers and that the other stakeholders only listened to other stakeholders. This is suggested by the feeling ignored frame. Feeling ignored has an influence on trust, farmers did not trust the people who prepared the legislation, even though the farmer's organisation was included. According to Termeer (2009) the lack of trust is part of the barriers farmers have. Farmers and other stakeholders are stereotyping potential partners (Termeer, 2009). This result indicates that farmers use different frames to stereotype other stakeholders, they use "bad guys frame" and "desk people frame". This stereotyping also has an influence on the lack of implementation of the legislation. This also results in a conflicting conviction concerning good policy making.

Secondly, different reasons were given by the stakeholders on why the legislation has not yet been implemented. The reasons were related to explanation, understanding and money. Regarding to Shortalla et al. (2016) farmers have different barriers, namely: financial barrier, not taking the time and lack of education or knowledge (Shortalla, et al., 2016). The financial barrier is clear when the farmers and other stakeholders argue that there is no money to changes their practice. Looking at Ellis-Iversen's model extrinsic barriers from community and industry show that "no financial gain

from implementing” is a barrier (Ellis-Iversen, et al., 2010). This is also the case for the cow-calf separation legislation, it only costs money for the farmers to implement. Within the lack of explanation, it shows that the “not taking the time” barrier becomes clear. Farmers said that they do not want to hear about it, which makes it difficult to inform them. Focusing on the lack of understanding it could be said that the lack of education or knowledge barrier is important here. It cannot be said that the farmers have a lack of knowledge, but they might have another type of knowledge. They learn from practice, while the legislation is based on scientific literature. The farmers say that the practice is working well as it is now, and that they do not understand why they should change that.

Thirdly, no one of the stakeholders had a clear idea on how the 12-hour rule could be inspected in practice. They said that it is possible to see the difference because the calf is still wet in the first 12 hours. But when the cow licks the calf dry or the farmer rubs the calf dry it is impossible to see if the calf is 3 or 12 hours old. Therefore, it is hard or even impossible to control the legislation. The inspectors cannot see how old the calf is, but the farmers also do not always know the exact time a calf is born, and therefore they might not know when to separate them. This suggests that the law will not be implemented, because the farmers do not know the age or do not want to know the age and will separate them whenever it is convenient. According to Ellis-Iversen’s model “no available knowledge of control measures” is an extrinsic barrier from knowledge, skills and ability and “not possible to control on farm” is an intrinsic barrier from belief in self-efficacy (Ellis-Iversen, et al., 2010). This is in line with this thesis because farmers do not know how the government will control the legislation.

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### 5.2.3 MANAGING THE PROBLEM

Managing the problem is influenced by implementation, monitoring and evaluation. Before farmers will implement the legislation they need to be informed. The farmers need to be informed why, how and when to implement this legislation. Informing is one of the four modalities of communication within interaction (Van Woerkum & Aarts, 2008). But it would be better if the farmers would feel involved already in the beginning of the negotiation process, this will solve the “feeling ignored frame”. This could be done by the farmers organisation, they could organise a meeting with farmers, in different regions of Denmark after each meeting with the working group. In this way they could explain the steps which were taken in the meeting and discuss and negotiate with the farmers which direction they should turn next meeting. This transparent communication between farmers and farmer’s organisation could improve their trust.

Firstly, looking back at the results it also mentioned that it was hard to figure out who was responsible for communicating with the farmers. The working group noticed that there were articles written about the new legislations, but none of those articles were specifically about the cow-calf separation. The farmers heard that they have to implement this cow-calf separation legislation but not why. Farmers pointed towards different stakeholders who they think have to communicate with them about this legislation. Again, different people are held responsible for this, which makes it unclear who should inform the farmers. According to Jansen et al. it is possible to divide farmers into four different types that all need to be informed in a different way (Jansen, Steuten, Renes, Aarts, & Lam, 2010). Jansen and colleagues divided farmers into: Pro-activists, do-it-yourself-ers, wait-and-see-ers and reclusive traditionalists. In the results it was mentioned that farmers had a ‘wait and see’

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frame towards implementing this new legislation. The wait-and-see-ers are open for advice; intensive personal support may be a key initiative for this group. This might make the veterinarian a suitable person to discuss this new legislation with the farmers. Other research suggests that communication with other farmers can also be a key to learning and expanding one's knowledge (Kuiper, Jansen, Renes, Leeuwis, & Van der Zwaag, 2005).

Secondly, the farmers also argue that there were no dialogues between them and other stakeholders, even when they tried, they did not feel respected. Regarding the policy process, they did not feel included in the planning and decision-making (Dewulf, 2013). Without having dialogues, it is hard to have successful negotiation process. Following Leeuwis and Van der Ban (2004) the negotiation process was distributive: stakeholders hold their own perceptions and positions (Leeuwis & Van der Ban, 2004). If there is no communication between the stakeholders it is impossible to negotiate (Van Woerkum & Aarts, 2008).

Thirdly, some people from the working group believe that the farmer still will implement this legislation, because those people noticed the positive sides of the law. But without telling the farmer this view it is hard for the farmer to understand why he should change his current business and implement this new legislation. The results demonstrate a variance in the "solution frame". Farmers do not see implementation of the legislation as a solution, while some people from the working group see the legislation itself as the solution. According to Kilpatrick and Johns social and business networks might provide support for farmers when implementing change (Kilpatrick & Johns, 2003). Those interactions helped farmers to compare views and information on how others apply changes.

Lastly, looking at the different phases of policy process, the stakeholders have different ideas about managing the problem (Dewulf, 2013). The working group has managed the problem by making the legislation, because they thought that the problem was the lack of legislation for this topic. The farmers think that having legislation is the problem. This means that they are not implementing this legislation at all. Therefore the farmers will not further monitor and evaluate the cow-calf separation, and this suggest that they will not implement the sub-processes within the last phase; managing the problem. This hint at the issue and the solution are seen differently between the legislation and practice.

### 5.3 PRACTICAL IMPLICATIONS

In the previous sub-chapters, the main findings in relation to the research questions and the reflection on the findings were discussed. In this chapter these findings and theoretical implications are translated to practical implications.

Looking at the previous chapters it does not seem that the legislation will change anything in practice. There are a lot of different factors that have an influence on it. As said above the different phases of policy process were not completed. This need to be changed in order to be sure this legislation will be implemented in the way it was designed.

A lesson the working group can learn from this case is that transparency is a necessity when it comes to legislation. There are so many questions from the farmers' side on different levels, which clearly shows that something did not go well. Farmers do not know why the working group focused on the cow-calf separation, afterwards they did not know why the cow and calf should stay together for 12

hours in an individual calving pen. And lastly they never heard how and when the government would inspect and enforce this legislation. This hints that communication from the working group, and especially the farmer's organisation, towards the farmers and other participants was not present at all.

The farmer's organisation should have informed the farmers in different ways. Now it seems that the farmers were only informed by the farmer's magazines and newspapers and often about the whole set of legislation, not in details about cow-calf separation. It would be better if the farmer's organisation and other professionals would use different ways to inform the farmers, to ensure that every farmer received the information in their preferred way. If farmers receive the information in their preferred way, the chance is much higher that the farmer will apply this information in practise. In this end the applying in practise is the desired result.

Another learning point for the farmer's organisation is the involvement of the farmers during the process. Farmers felt that they were not involved and they felt ignored by their farmer's organisation. This feeling of being excluded during and after the process made it difficult for the farmers to trust the other participants and the legislation. The farmer's organisation should communicate transparent towards the farmers about that they thought that cow-calf together had to be a part of the packet. Because the farmers organisation really wanted to avoid cows on pasture.

Looking at those aspects it becomes clear that the Danish legislation turned out to be a failure. The cow-calf separation legislation was drowning in a compromise where the farmer's organisation focussed on avoiding cows obligated on pasture. This avoiding was the head aim of the farmer's organisation whereby they forgot the other possible barriers of implementing cow calf together.

Farmers could be more pro-active in searching for the positive side of the legislation. Right now they show little open-mindedness and availability of cognitions. Although they frame the working group as desk people, they all have their own knowledge and expertise which is undervalued by the farmers. It would reduce a lot of anger if the farmers could shift their views into a more positive side. This might be a difficult question, because due to the crisis it is difficult to see the bright side or signs of development. Perhaps new, animal friendly, labels can be developed based on calves that stay together with their mothers for longer periods of time, which will achieve more money for the farmers. Farmers could also frame the compromise as very successful since this legislation cannot have consequences for the farmers and it kept the enforcement on grazing at a distance. It can therefore primarily be regarded as a symbolic legislation.

For the future it is important to make legislation whereby all involved stakeholders understand why this legislation is made and why it is important to implement this legislation. When farmers implement this legislation it is essential that it is possible to control this legislation.

#### 5.4 LIMITATION

One limitation, was the focus on the controversial issue, because the cow-calf separation was a controversial issue in the Netherlands. There, experimental work with keeping cow and calf together, primarily carried out on relatively small organic farms, has been put forward as the alternative for the sector as a whole. In Denmark the case was a controversial issue, but in a different way. In the Netherlands it was a public debate, however in Denmark it appeared that the legislation was put

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under the carpet instead of debated. The legislation was made together with other legislation that got more attention and was seen as more important. Therefore, the cow-calf separation legislation was standing in the shadow of the other legislation.

Another limitation was the choice for semi-structured interviews as data collection. With these interviews a topic list was made, this kind of a topic list provided some freedom. But this also made interviews different. How the interview went depended greatly on the stakeholder. This meant that sometimes some topics were not discussed. It would be better if all topics were discussed with all stakeholders, because when a topic was not discussed you would never know what their opinion about that subject was. It would be better if the reins were kept a bit tighter on the direction of the interview, to ensure that the topic list was finished when the interview was finished as well.

A third limitation was that the working group had worked on the legislation 8 years ago. Therefore, some people who were part of the working group and represented an organization had already changed jobs. Therefore not all participants could be interviewed. The people who were still representative for the same organization had a hard time with retrieval of memories. They all mentioned a few time that it was a long time ago and that they could not remember it that clear, instead of answering the question. Another limitation was that the process was already finished. It would be interesting to join the negotiation table to see how the process developed instead of only hearing about it. It might give more insights in the communication between the different stakeholders.

Lastly, the fourth limitation was the language barrier. Interviewing Danish farmers was not that easy. One Danish farmer could speak English very well; one farmer was sometimes hard to understand. And for one other farmer someone translated what he was saying. Because of this language barrier Dutch farmers, who lived in Denmark for a while, were interviewed as well. Interviewing Dutch farmers was easy because we could speak in our native language. In order to minimize the difference, it was made sure that all Dutch farmers had lived in Denmark for more than ten years. The norms and values however still may differ slightly. To get more insight in those differences more research is needed.

## 5.5 SUGGESTIONS FOR FURTHER RESEARCH

For further research it might be interesting to see what the difference is when the farmers felt that they were involved from the first moment of the legislation making process, when discussions take place. For this legislation it is not possible, because this legislation has already been made. But when new legislation is made concerning animal welfare it might be interesting to analyse how the process will be when the farmers felt involved right at the beginning. Denmark could change the current legislation into a legislation which is controllable by inspectors. If they do, it would be interesting to see how the farmers react to the legislation, would they implement the legislation or not. Another interesting research will be on how this involved feeling could be improved. Which factors have an influence on the “feeling-not-involved”-feeling of the farmers? It could be that the farmer’s organisation in Denmark is too large and powerful, which creates a gap between the organisation and their individual farmers.

Further research on the same topic could also be done after 2024. This is the year when all farmers have to have changed their farm and practice in a way that the cow and calf are together for 12

hours in an individual calving pen. It could be possible that the whole situation has changed in a positive way; maybe the current crisis has been solved. This means that the farmers would have had the money to be able to change their methods. Another possibility could be farmer's organisation and the ministry of Agriculture together try to improve their communication on this specific law. Improving the communication which should focus on understanding, explanation and transparency might change the current frames the farmers have right now about the legislation. This suggests that it would be worth knowing to continue this thesis, because the legislation implementation must be finished by all farmers before 2024.

Another interesting research opportunity might be the difference between the Danish and the Dutch legislation making. Denmark and the Netherlands are both linked with the EU-legislation and the countries lying close to each other. But it might be important to check how the governments are positioned. Are the legislations made in the same way in the Netherlands as in Denmark? It would be interesting to see the differences and similarities, but especially the reasoning behind the legislation making process set up. If the countries are similar in legislation making, then it would be interesting to implement the aspects which made the legislation a failure in Denmark in the Netherlands, and here to focus on whether the communication of a new legislation is done differently between the countries.

Lastly, there is no legislation about the cow-calf separation in the Netherlands. When the government decides to make a legislation about this topic it might be interesting to include the learning points from this thesis, namely: the use of the three phases of policy process. When those learning points are implemented in the right way, it is interesting to see the outcome.

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## 6. CONCLUSION

The main aim of this thesis was to find out if the cow and her calf would be together in the future. This was done by analysing how different stakeholders framed and communicated the process of the making and implementing of the cow-calf separation legislation in Denmark. Through the use of interviews, a qualitative study was used to detect different frames, communication and views among the various stakeholders on the process. Four different research questions were made:

- *What was the reason for making the cow-calf separation legislation in Denmark?*
- *What frames did Danish stakeholders have about issues and involved stakeholders in the cow-calf separation case?*
- *How did Danish stakeholders communicate with each other during and after the process cow-calf separation legislation?*
- *What were the frames of different stakeholders in preparation phases and the implementation of the legislation?*

The making of the cow-calf legislation was a compromise within the working group “Arbejdsgruppen om hold af malkekvæ”, hidden amongst other legislations, whereby other legislations were framed as more important. The process of the working group was influenced by strategically giving and taking, which stranded in a 12 hours together cow-calf legislation. But no literature or practical examples were used by the working group to explain why cow and calf should stay together for 12 hours. Due to this lack of underpinning this cow-calf separation legislation resulted in a lack of transparency for all stakeholders.

In this thesis different theories were used which were all gathered under the different phases of policy process: understanding, planning and decision-making, and managing the problem. However, the first phase of this policy process, understanding, was not applied. In this case of no shared understanding, the process cannot successfully be completed. As the lack of common understanding leads to different own truth frame, frames of reference and issue frames. It would have been better if the process was stopped and restarted with all stakeholders having a common understanding of the problem. However, in this case the working group just moved on. There was no common understanding because different stakeholders had their own truth why the legislation was made. They based their own truth on their own frames of reference which is influenced by their beliefs, norms, values, convictions and knowledge. Without this mutual understanding and clear explanation with the farmers, distrust developed which caused farmers to not implement this legislation. This was one of the factors which made it unclear what the reason was to make legislation about the cow-calf separation in Denmark.

When the cow-calf separation legislation was made, different barriers were pointed out by different stakeholders in the planning and decision-making phase. The farmers felt ignored during the process, because they felt not involved in the process at all, even though their own organisation sat at the table too. Therefore, they had conflicting conviction concerning good policy making. Government and farmers both saw a lack of available knowledge of control measures, which caused another barrier for not implementing the legislation. Scientists, veterinarians, journalists, government, farmers and animal protection groups all saw a financial barrier, because farmers do not have any money to implement the legislation due to the crisis. On top of that the legislation does not give a

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financial gain from implementation. The last barrier is the lack of a trusted source of information, this barrier was seen by the animal protection group, farmer and scientist. This barrier can be solved if the working group or the farmer's organisation together with the ministry of Agriculture, had improved their communication towards the farmers. Some scientist saw only positive points by implementing the legislation instead of the negative sides from the other stakeholders. This suggests that stakeholders had different frames according to implementing the legislation. A lot of those barriers need to be overcome before the legislation will be implemented.

Looking at the last phase of the policy process, managing the problem, was done by the farmers in two different ways, namely: wait and see what will happen and secondly say what the authorities want to hear. Both because farmers do not intend to change anything in their practice related to this legislation. Farmers should implement this law before 2024, so there is time left for the authorities to see how they will control and enforce this law. The farmers will wait and see what the authorities will do before they implement this legislation.

This thesis provided a clear overview of important aspects concerning the making and implementing of animal welfare legislation. Understanding, planning and decision-making, and managing the problem are important aspects for a good process. The research gives a novel insight into the difference between drafting legislation and how it will be implemented and complied within the practice. Following the different phases of policy process in the way it is meant could lead new legislation to successful implementation. Unfortunately, in the case of legislation for cow-calf separation those three phases of policy process are not carried in the way it should. This makes it doubtful that the cow and the calf will be together in the future.

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## APPENDIX I: INTERVIEW GUIDE

- *What was the reason for making the cow-calf separation legislation in Denmark?*
- *What frames did Danish stakeholders have about issues and involved stakeholders in the cow-calf separation case?*
- *How did Danish stakeholders communicate with each other during and after the process cow-calf separation legislation?*
- *What were the frames of different stakeholders in preparation phases and the implementation of the legislation?*

<i>Concepts</i>	<i>Objectives</i>	<i>Topics</i>	<i>Aspects</i>	<i>Questions for stakeholders who were not involved in the process</i>	<i>Questions for stakeholders involved in the process</i>
Danish stakeholders	To identify the Danish stakeholders in the 'cow-calf separation case'	Danish stakeholders in the cow-calf separation case	<ul style="list-style-type: none"> <li>- Government</li> <li>- Scientists</li> <li>- Danish Agriculture and Food Council (Cattle-section of Danish Agriculture and Food council)</li> <li>- NGOs (Animal activist)</li> <li>- Farmers</li> <li>- Veterinarians</li> <li>- Politicians</li> <li>- Advisors from the feed and dairy industry</li> </ul>	<ul style="list-style-type: none"> <li>- Were you involved in the cow-calf legislation process?</li> <li>- Why were you (not) involved in the cow-calf legislation process?</li> <li>- Do you know who were involved in the cow-calf legislation process?</li> <li>- Why were they involved in the cow-calf legislation process?</li> </ul>	<ul style="list-style-type: none"> <li>- Were you involved in the cow-calf legislation process?</li> <li>- Why were you (not) involved in the cow-calf legislation process?</li> <li>- Do you know who were involved in the cow-calf legislation process?</li> <li>- Why were they involved in the cow-calf legislation process?</li> </ul>
	To identify the relations between the stakeholders	Relations/contact between stakeholders	<ul style="list-style-type: none"> <li>- Negative</li> <li>- Positive</li> <li>- Neutral</li> </ul>	<ul style="list-style-type: none"> <li>- Do you have contact with the other involved stakeholders?</li> <li>- With who did you have contact?</li> <li>- How would you describe this contact/relation ?</li> </ul>	<ul style="list-style-type: none"> <li>- Do you have contact with the other involved stakeholders?</li> <li>- With who did you have contact?</li> <li>- How would you describe this contact/relation?</li> </ul>
Communication	Determine which types of communication the stakeholders use	Types of communication	<ul style="list-style-type: none"> <li>- Formal</li> <li>- Informal</li> <li>- Direct <ul style="list-style-type: none"> <li>o face-to-face</li> <li>o skype</li> <li>o call</li> </ul> </li> <li>- Indirect <ul style="list-style-type: none"> <li>o Social media</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- In what way do you have contact with other involved stakeholders?</li> <li>- How often do you have contact with other involved</li> </ul>	<ul style="list-style-type: none"> <li>- In what way do you have contact with other involved stakeholders?</li> <li>- How often do you have contact with other involved stakeholders?</li> </ul>

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			<ul style="list-style-type: none"> <li>o Media (journals, news,</li> <li>o Text/WhatsApp</li> </ul>	<p>stakeholders?</p> <ul style="list-style-type: none"> <li>- With which other stakeholders do you have the most contact?</li> </ul>	<ul style="list-style-type: none"> <li>- With which other stakeholders do you have the most contact?</li> </ul>
	Identity how did a dialogue between different actors developed	Dialogue between stakeholders	<ul style="list-style-type: none"> <li>- Positive</li> <li>- Negative</li> <li>- Neutral</li> </ul>	<ul style="list-style-type: none"> <li>- How was the communication between the other stakeholders?</li> <li>- How would you describe this communication</li> </ul>	<ul style="list-style-type: none"> <li>- How was the communication between the other stakeholders?</li> <li>- How would you describe this communication?</li> </ul>
	Identity why a dialogue between different actors developed		<ul style="list-style-type: none"> <li>- Learn about environment (Exploring)</li> <li>- Positioning and creating image (Informing)</li> <li>- Gain control (Relating to others)</li> <li>- Arrive at agreement (Negotiating)</li> </ul>	<ul style="list-style-type: none"> <li>- For what purpose do you have contact with other involved stakeholders?</li> </ul>	<ul style="list-style-type: none"> <li>- For what purpose do you have contact with other involved stakeholders?</li> </ul>
	Find out if the communication of stakeholders changed over time	Communication change	<ul style="list-style-type: none"> <li>- Yes</li> <li>- No</li> </ul>	<ul style="list-style-type: none"> <li>- Did the communication between you and other stakeholders changed over time?</li> <li>- In what way did the communication changing?</li> <li>- When did the communication change?</li> <li>- Why did the communication change?</li> </ul>	<ul style="list-style-type: none"> <li>- Did the communication between you and other stakeholders changed over time?</li> <li>- In what way did the communication changing?</li> <li>- When did the communication change?</li> <li>- Why did the communication change?</li> </ul>
Frames	Identify how they framed the issue	Framing case	<ul style="list-style-type: none"> <li>- Economic goals</li> <li>- Technical performance</li> <li>- (re)production parameters</li> <li>- Biological parameters</li> <li>- Physiological parameters</li> <li>- Behavioural parameters</li> <li>- Regular care</li> </ul>	<ul style="list-style-type: none"> <li>- How would you describe your view on the cow-calf separation legislation?</li> <li>- How was de view of other stakeholders on the cow-calf separation legislation?</li> <li>- Was this view in line with your</li> </ul>	<ul style="list-style-type: none"> <li>- How would you describe your view on process of the cow-calf separation legislation?</li> <li>- How was de view of other stakeholders on the process?</li> <li>- Was this view in line with your view?</li> </ul>

			<ul style="list-style-type: none"> <li>- Basic needs</li> <li>- Animal Health / antibiotics use</li> <li>- Stockman ship</li> <li>- Visual images and icons</li> <li>- Natural behaviour</li> </ul>	<ul style="list-style-type: none"> <li>view?</li> <li>- Which stakeholders had (not) the same view</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Which stakeholders had (not) the same view</li> <li>- How would you describe your view on outcome of the cow-calf separation legislation?</li> <li>- How was de view of other stakeholders on the cow-calf separation legislation?</li> <li>- Was this view in line with your view?</li> <li>- Which stakeholders had (not) the same view</li> </ul>
	Identify the story which was being told	Story	<ul style="list-style-type: none"> <li>- Positive</li> <li>- Negative</li> <li>- Neutral</li> </ul>	<ul style="list-style-type: none"> <li>- What can you tell me about the outcome of the cow-calf separation legislation?</li> <li>- How would you see this new law?</li> <li>- Why would you see the outcome like this?</li> <li>- What does this new law mean for the animal welfare of the dairy cow?</li> <li>- What does this new law mean for the animal welfare of the calf?</li> <li>- Why do you think the cow-calf separation was on the political agenda?</li> <li>- How were you informed about the new legislation and specifically about cow-calf separation?</li> <li>- If you were not informed, how would you like</li> </ul>	<ul style="list-style-type: none"> <li>- What can you tell me about the process of the cow-calf separation legislation?</li> <li>- How would you describe this process?</li> <li>- Why would you describe the process like this?</li> <li>- What can you tell me about the outcome of the cow-calf separation legislation?</li> <li>- How would you see this new law?</li> <li>- Why would you see the outcome like this?</li> <li>- What does this new law mean for the animal welfare of the dairy cow?</li> <li>- What does this new law mean for the animal welfare of the calf?</li> <li>- Why do you think the cow-calf separation was on the political agenda?</li> <li>- Do you know how the farmers were</li> </ul>

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				<p>to BE informed?</p> <ul style="list-style-type: none"> <li>- Are there things you want to know about the background that you don't know today?</li> </ul>	<p>informed about the new legislation and specifically about cow-calf separation?</p> <ul style="list-style-type: none"> <li>-</li> </ul>
	<p>Identity where the story did differ among the stakeholders</p>	<p>Different stories</p>	<ul style="list-style-type: none"> <li>- Convictions</li> <li>- Values</li> <li>- Norms</li> <li>- Knowledge</li> <li>- interests</li> </ul>	<ul style="list-style-type: none"> <li>- Do you think all stakeholders have the same view on the outcome of the cow-calf legislation?</li> <li>- Why do you think they have/have not?</li> </ul>	<ul style="list-style-type: none"> <li>- Do you think all stakeholders have the same view on the process?</li> <li>- Why do you think they have/have not?</li> <li>- Do you think all stakeholders have the same view on the outcome of the cow-calf legislation?</li> <li>- Why do you think they have/have not?</li> </ul>
	<p>Find out if this frame did change over time</p>	<p>Frame change</p>	<ul style="list-style-type: none"> <li>- frames will not change (Conforming)</li> <li>- know about other frames, but do not change (Bureaucratizing)</li> <li>- new, unexpected and original frames (Creating)</li> <li>- reality, resulting problem solving frames (innovating)</li> </ul>	<ul style="list-style-type: none"> <li>- Was your view on the process the same during the whole process?</li> <li>- Why did you (not) change your view?</li> <li>- Was the view of other stakeholders the same during the whole process?</li> <li>- Why did they (not) change their view?</li> <li>- What is your view on the outcome of the cow-calf legislation?</li> <li>- What is your view right now?</li> </ul>	<ul style="list-style-type: none"> <li>- Was your view on the process the same during the whole process?</li> <li>- Why did you (not) change your view?</li> <li>- Was the view of other stakeholders the same during the whole process?</li> <li>- Why did they (not) change their view?</li> <li>- What is your view on the outcome of the cow-calf legislation?</li> <li>- What is your view right now?</li> </ul>
<p>Cow-calf separation legislation</p>	<p>Describe what the cow-calf separation case mean</p>			<ul style="list-style-type: none"> <li>- What can you tell me about the separation of cow-calf?</li> <li>- Can you tell me why the legislation was made?</li> <li>- Do you know what was the reason to make this new law?</li> <li>- Do you know if</li> </ul>	<ul style="list-style-type: none"> <li>- What can you tell me about the separation of cow-calf?</li> <li>- Can you tell me why the legislation was made?</li> <li>- Do you know what was the reason to make this new law?</li> <li>- Do you know if</li> </ul>

				<p>there were other solutions instead of this law?</p> <ul style="list-style-type: none"> <li>- Do you yourself see other solutions?</li> <li>- What do you have to change in your farm? *</li> <li>- What is your view on the transition period?</li> <li>- Can you tell me some advantages of this new law?</li> <li>- Can you tell me some disadvantages of this new law?</li> </ul>	<p>there were other solutions instead of this law?</p> <ul style="list-style-type: none"> <li>- Do you yourself see other solutions?</li> <li>- What is your view on the transition period?</li> <li>- Can you tell me some advantages of this new law?</li> <li>- Can you tell me some disadvantages of this new law?</li> </ul>
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\*Questions only for farmers

## APPENDIX II: QUESTIONS FOR FARMERS

Questions for farmers:

Tell me some facts about your farm

- Size, number of animals
- Is there a special way he has calves and so on.
- When does he take the calf from the cow now, how many calves every year, management
- Who is looking after the calves, how many employees

Cow-calf separation

- What can you tell me about the separation of cow-calf?
- What can you tell me about the cow-calf separation legislation?
- Do you know what was the reason to make this new legislation? Can you explain?
- Why do you think the cow-calf separation was on the political agenda?
- Do you know who made the cow-calf legislation?

Will the cow and her calf be together in the future?

Individual calving pen

- What can you tell me about the individual calving pen?
- Do you already have individual calving pen?
- If not, are you planning to build one?
- What he is opinion on using individual carving pens?

Your view

- How would you describe your view on the cow-calf separation legislation?
- Do you know how others see the cow-calf separation legislation?
  - For instance, other farmers? Your colleagues
  - Your adviser?
- Was this view/these views in line with your view?

Communication

- How were you informed about the new legislation and specifically about cow-calf separation?
  - Did you read about it in Landbrugsavisen
  - On the internet
  - did you get written information from your adviser or veterinarian
- If you were not informed, how would you like to BE informed?
- Did you discuss this topic with other farmers? With your adviser, with the veterinarian?

Transition period

- What is your view on the transition period?

Influence

- In your opinion - What do you think this this new law mean for the animal welfare of the dairy cow?
- In your opinion - What does this new law mean for the animal welfare of the calf?
- What do you have to change in your farm if you are going to follow the law?
- Can you tell me some advantages of this new law?
- Can you tell me some disadvantages of this new law?

#### Control

-How do you think authorities will control this law?

#### Alternatives

-Do you know if there were other alternatives suggested instead of this law?

-Do you yourself see alternatives?

-Are there things you want to know about the background of the law that you don't know today?

- Do you have any questions to me?

### APPENDIX III: QUESTIONS FOR STAKEHOLDERS INVOLVED IN THE PROCESS

-What can you tell me about the separation of cow-calf? Could you explain this further?

-Can you tell me why the law was made?

-Do you know what was the reason to make this new law?

-How did you hear/how were you informed about this new legislation?

- What did you hear of the process?

- How it evolved?

- Who were involved?

-Do you know why you were (not) involved?

-How did you react on that?

-What would be/was your position if you were involved?

-How would the outcome of the cow-calf separation legislation?

-Your view

-View of other stakeholders

-Communication (farmers, media, other stakeholders)

-Implementation

-Management

-Do you inform farmers?

-How?

-Reaction?

-What is your view on the transition period?

Will the cow and her calf be together in the future?

-In your opinion - What does this new law mean for the animal welfare of the dairy cow?

-What does this new law mean for the animal welfare of the calf?

-Can you tell me some advantages of this new law?

-Can you tell me some disadvantages of this new law?

- How could this law be enforced effectively?

-Do you know if there were other solutions suggested during the process instead of this law?

-Do you yourself see other solutions?

-Are there things you want to talk about? Or explain further?

- Do you have any questions to me?

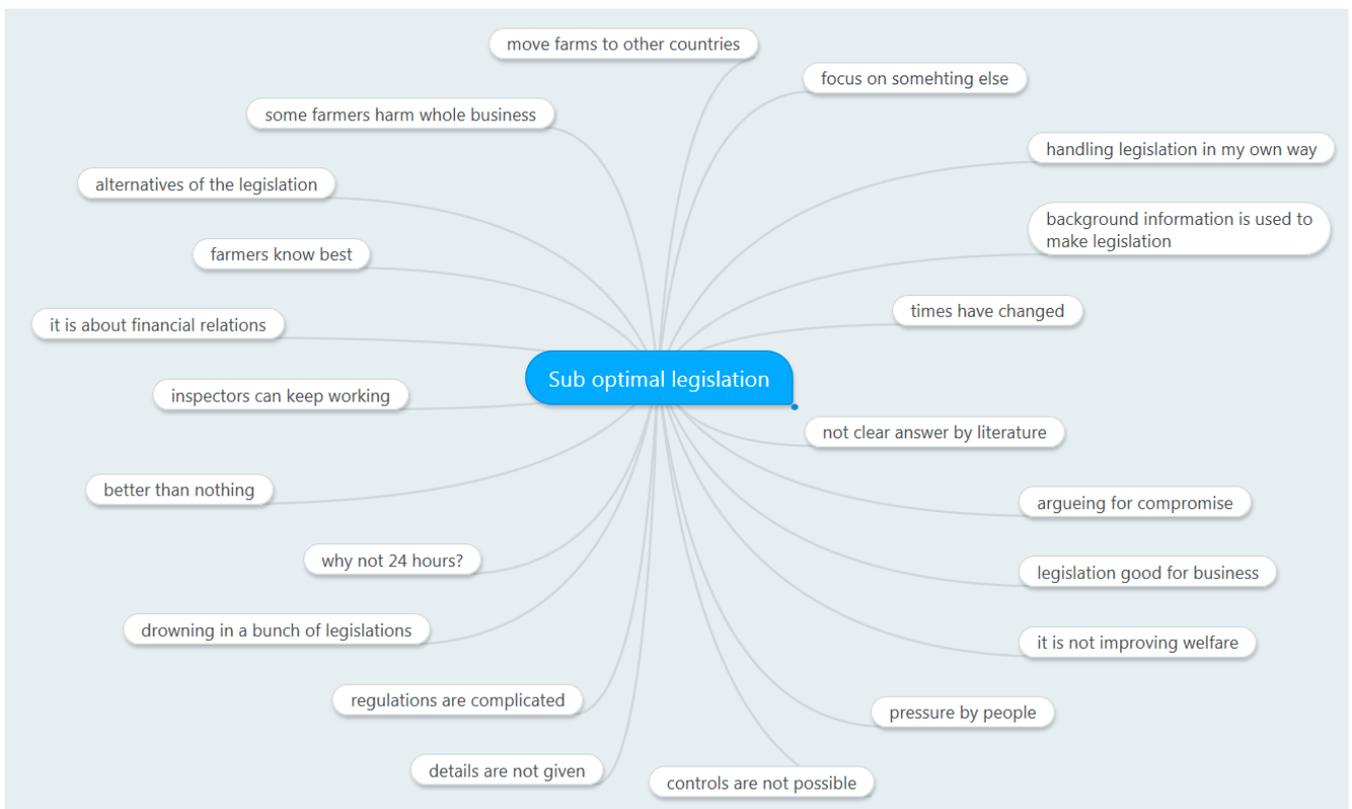
## APPENDIX IV: TOPIC LIST

- Cow-calf separation
  - o Legislation
  - o Reason
  - o Inform
- Process
  - o Evolved
  - o Why not
  - o Reaction
  - o Position
- Outcome
  - o Your view
  - o View others
  - o Communication
    - Farmers
    - Media
    - Others
    - About what: implementation/management
- Inform farmers
  - o How
  - o Reactions
- Transition period
- Influence legislation
  - o Farmers, welfare, health, behaviour
  - o Disadvantage
  - o Advantage
- Enforcement
- Alternative solutions
- Others things

APPENDIX V: MIND MAP – ATTITUDE COW-CALF SEPARATION

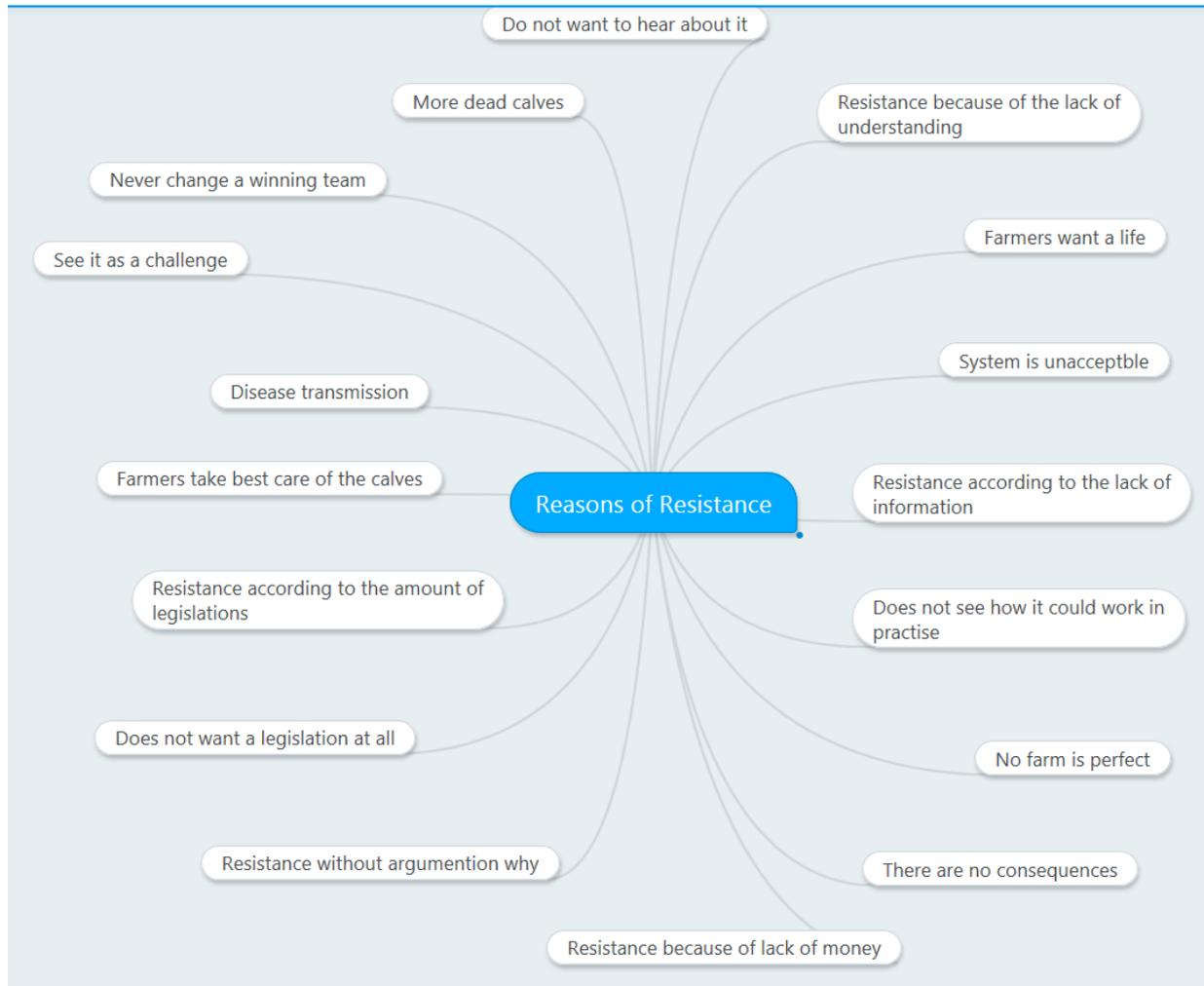


APPENDIX VI: MIND MAP – SUB OPTIMAL LEGISLATION



Will the cow and her calf be together in the future?

### APPENDIX VII: MIND MAP – REASONS OF RESISTANCE



### APPENDIX VIII: MIND MAP – VERBAL WAR



