

# Results from the citizen summit on climate change adaptation

- Saturday, the 5th of March, 2011, Kalundborg



Part-financed by the European Union  
(European Regional Development Fund)

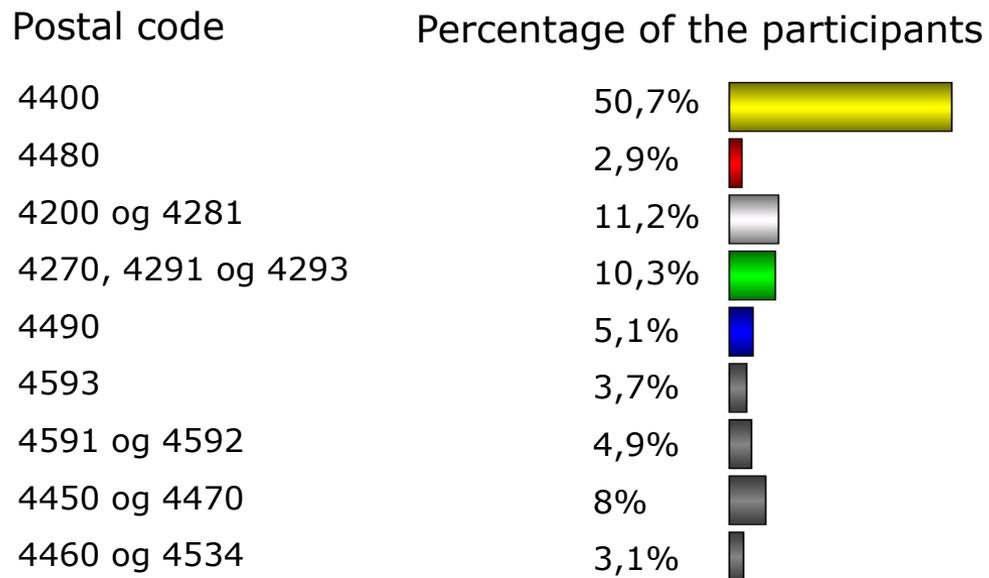
# 1. Introduction

We will begin with a number of simple voting-issues to become familiar with the equipment. Then a round of discussion among the tables to get to know each other and tell about personal experiences on climate change adaptation.

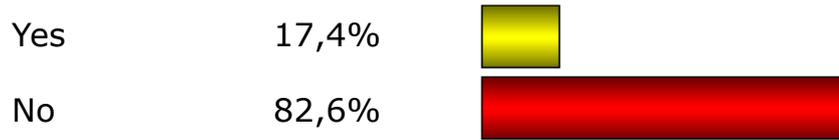
## 1a - Age

Age	Distribution in the municipality	Distribution at the citizen summit	
18-30 years	14,5%	0,2%	
31-45 years	25,2%	17,3%	■
46-60 years	28,2%	40%	■
> 61 years	32,1%	42,4%	■

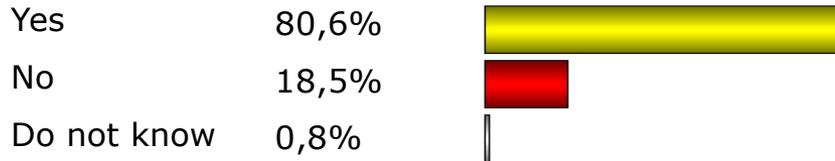
## 1b – Postal code of permanent address



**1c – Do you own a summer cottage in the municipality?**



**1d – Have you personally experienced problems in relation to storm surges or extreme precipitation e.g. flooded roads or similar?**



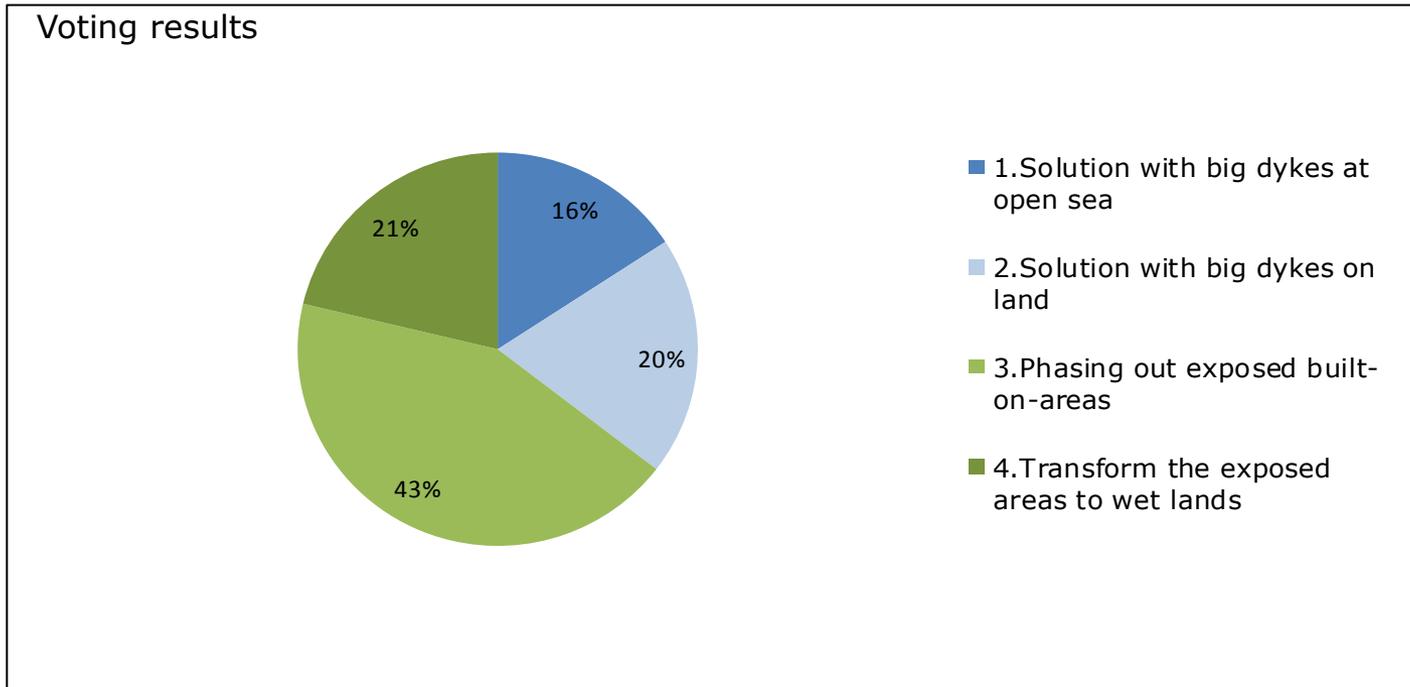
**1e – Have you been a victim of floods e.g. storm surges or extreme precipitation that has damaged your house?**



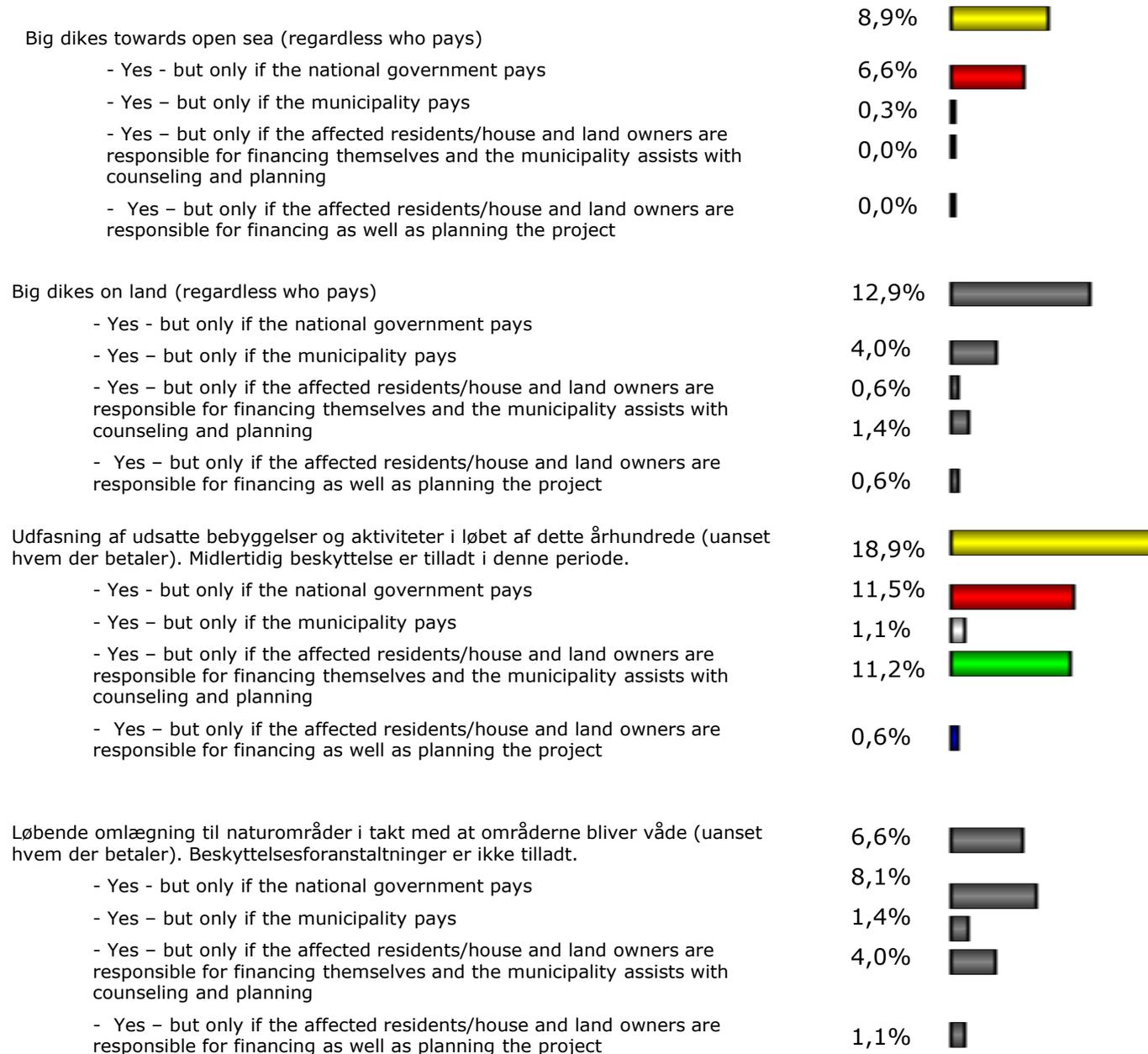
## **2. Exposed non-urban areas - the example of Reersø/Tissø**

Several non-urban areas are situated in a way that makes it very likely that they will be very wet due to heavy precipitation or raised sea level. To what extent do you think that the present land use with farming, natural resorts, summer cottage and all-year houses should be preserved and protected or to what extent should these areas in the future change their status from the present use to wetland? And what is the role for the municipality in this process?

We give a concrete example, namely the Reersø/Tissø area. Here you must pick one of the 4 alternative models of development.



## 2. Results in details



### 3. The city of Kalundborg

In this round of debate we will ask you to discuss the future of exposed areas within the city of Kalundborg. Different areas of the city are expected to be affected – but who should take the responsibility to handle these challenges and how should the municipality be involved?

#### Industry

Most of the areas near the sea is owned by Kalundborg Havn (Kalundborg Harbor) and different industries. A sea level rise above 170 cm will cause the sea to flood the urban housing areas just behind them.

#### **Question 3a: Should Kalundborg Havn and the industries along the coastline of the city have a co-responsibility to protect the areas behind them?**

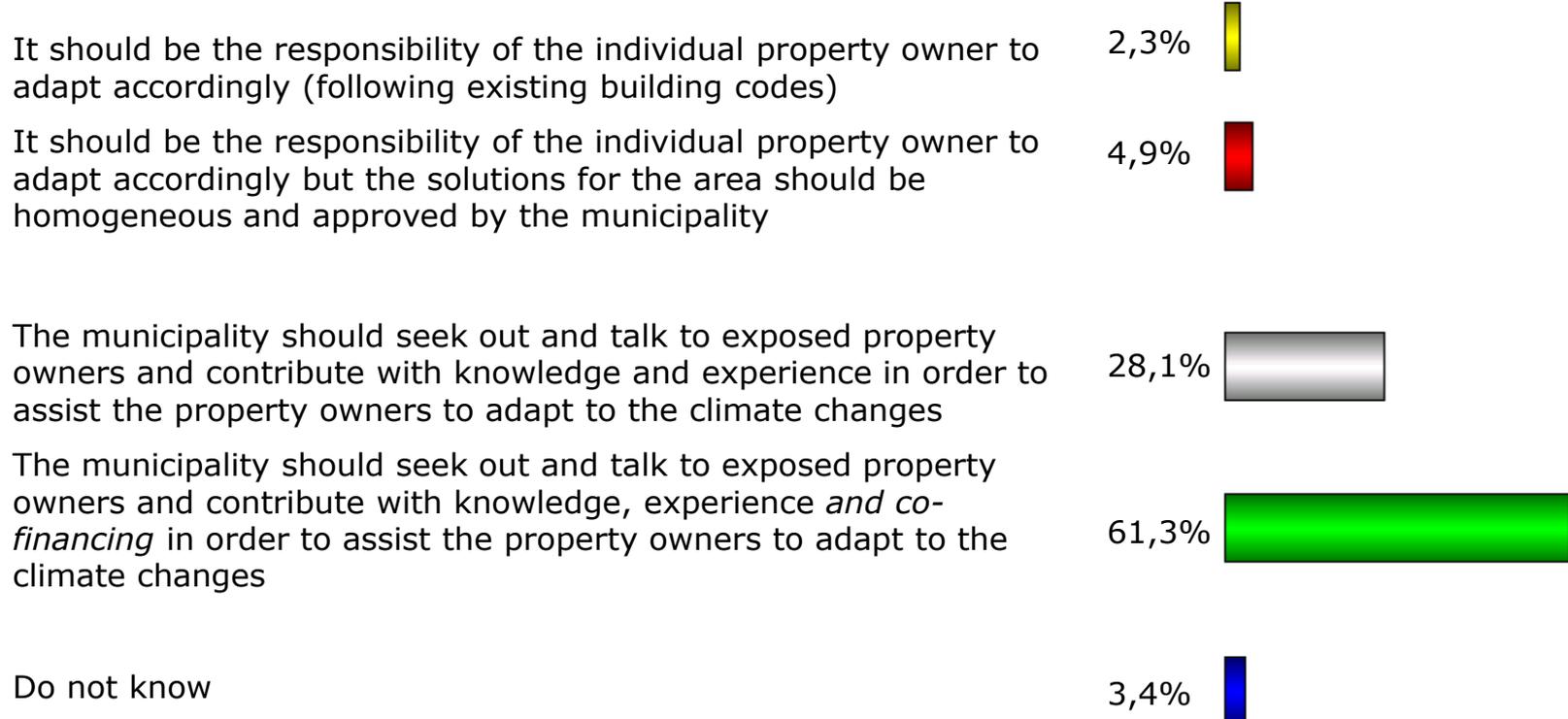


## Permanent residence (Strandstien/Gisseløre)

Strandstien/Gisseløre is an example of an urban area that primarily consist of privately owned permanent residence. Under the current legislation the sole responsibility of protecting private property is the individual property owner - which is why the municipality does not address the property owners in exposed areas to try to establish common solutions.

Should the municipality act more proactive in the future?

### **Question 3b: To what extend should the municipality assist the affected owners of private permanent residence e.g. in the case of Strandstien/Gisseløre?**



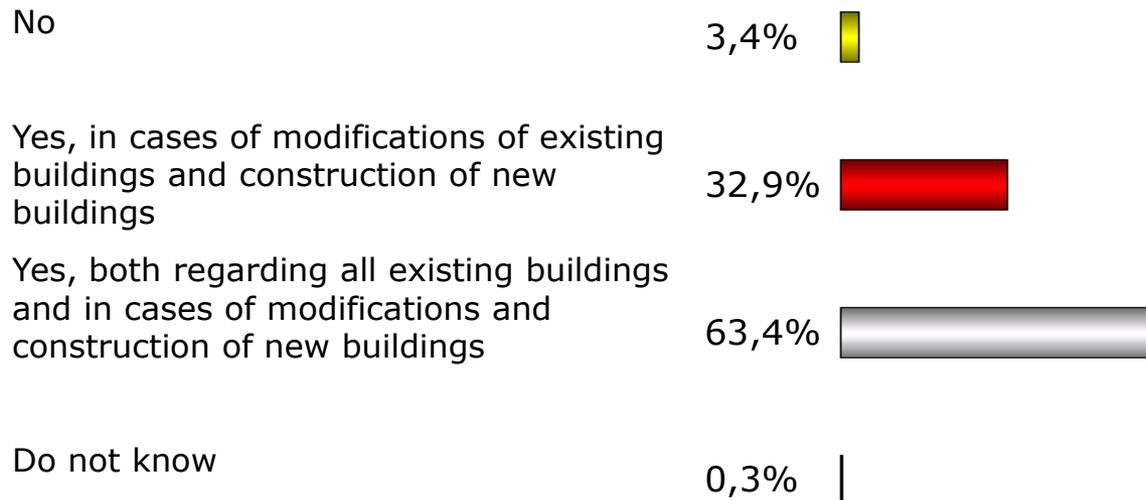
#### **4. Division of responsibilities between citizens and public authorities**

In this round of debate we would like you to discuss the division of responsibilities between individual citizens and the municipality. To what extent should the individual property owner have full responsibility for the protection of their property and where could the municipality take the responsibility to prevent and mitigate the effects of climate changes? In many ways this is a discussion about at which degree the municipality should have the possibility to make decisions on behalf of the community.

##### Buildings

To prevent floods as a consequence of climate changes it can be necessary for the municipality to change their current praxis and demand more of the individual property owner regarding the handling of precipitation on private property.

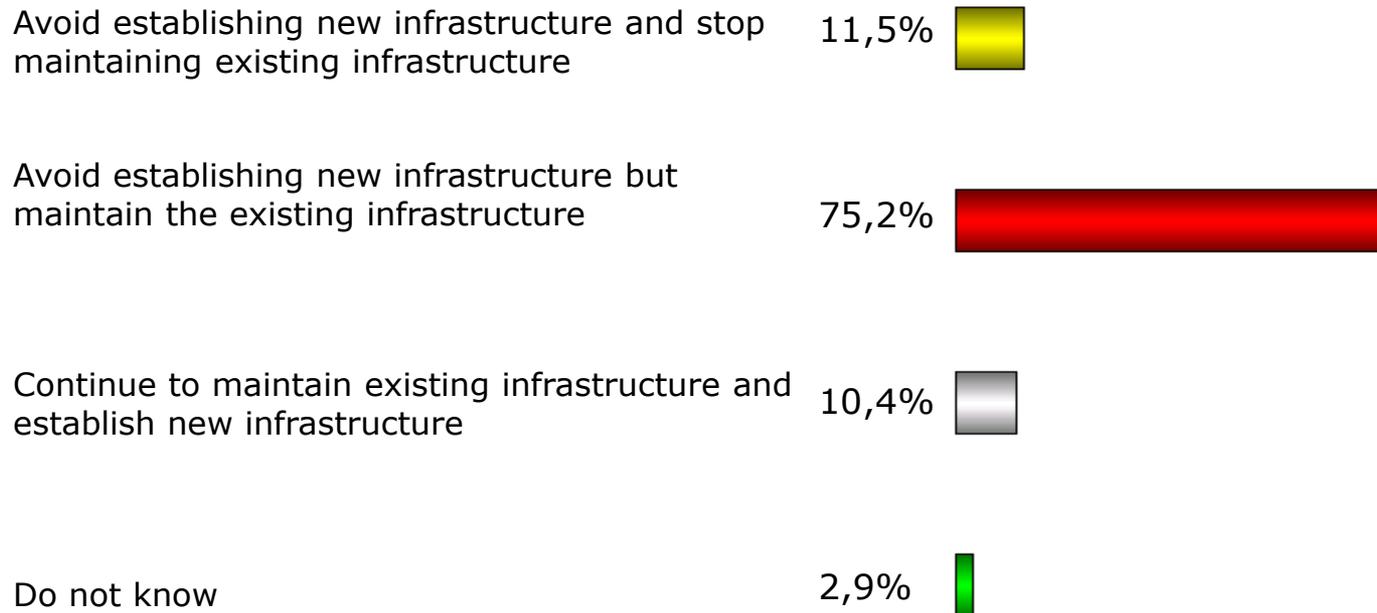
#### **Question 4a: Do you think it would be reasonable that the municipality increase their demands on how the property owners handle precipitation on their property?**



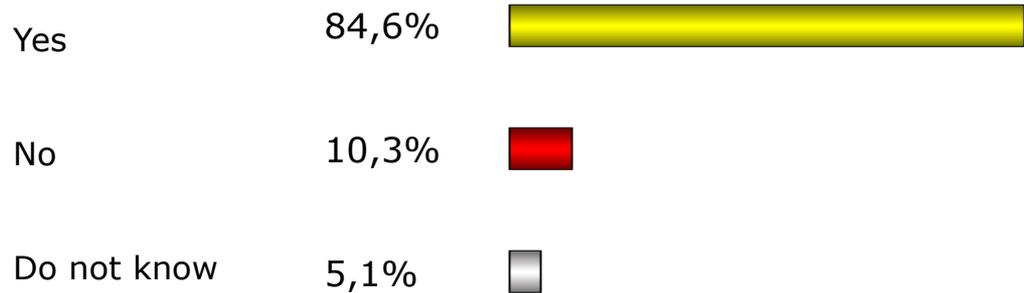
### Summer cottage areas

Many summer cottage areas near the sea and wet lands are exposed to consequences of the climate changes. Under the current legislation it is the responsibility of the municipality to maintain public infrastructure in these roads such as roads and sewers. In the future it can become very expensive and difficult to sustain and maintain the infrastructure and services in the summer cottage areas that is flooded frequently or even permanently

#### **Question 4b: How should the municipality handle the infrastructure in exposed summer cottage areas?**



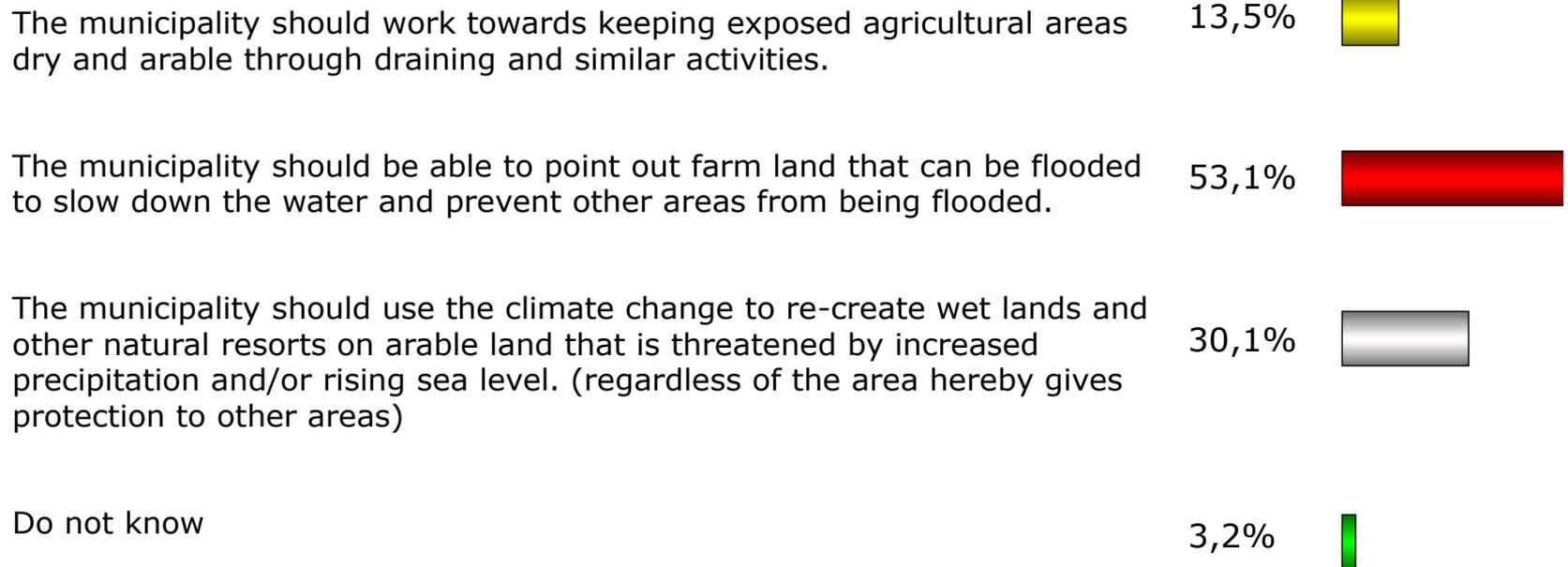
**Question 4c: Should it be possible for the municipality to alter the status of exposed summer cottage areas, to allow the areas to be flooded and eventually turn into wet lands without any human inhabitants?**



### Agricultural area

In some cases floods could be prevented in urban areas, summer cottages areas or other areas by allowing the adjoining agricultural land to be turned into wet lands, which delays the flow of water during extreme precipitation. In addition some consider this as a possibility to re-create lost nature. But farm land which is not kept dry and drained is not possible to cultivate as hitherto. How should the priority between the consideration of built-up areas, of nature and of agricultural areas be?

#### **Question 4d: In which statement about arable land do you agree the most?**



## 5. General strategy for adaptation

In this round of debate we will ask you to discuss two overall conditions about climate change adaptation. One is, who should have the responsibility to take decisions concerning coast protection. The other is, how urgent is the need for climate change adaptation and how high on the local politicians' agenda should it be?

### Coastal planning

As the legislation is today coast protection in the municipality of Kalundborg is left to local initiatives. In connection with the climate changes however it is discussed if there should be more political management in order to make a common plan for the coast. To what extent should the local stakeholders govern the development? And to what extent ought the management of the Danish coasts' development be governed by local or national authorities?

### **Question 5a: With which statement about coastal planning do you agree the most?**

The coastal planning should continue as it is today where citizens/local groups can get the national authorities' (Kystdirektoratet) permission to create coastal protection

7,8% 

It should primary be the municipality that decides where and how the coast should be protected on the basis of a common plan.

56,2% 

It should primary be the national government that decides the coastal planning on the basis of a national coast plan.

34,6% 

Do not know

1,4% 

### How urgent is it to make plans for climate adaptation?

The municipality can use different strategies in relation to climate change adaptation. Long-term plans and frames for the development that take the expected climate changes into account can be worked out now. Or the municipality can await the development of the climate changes, that is to follow the legal obligations and wait for development of possible new tools for climate adaptation.

### **Question 5b: Which attitude should we generally have towards climate adaptation in the municipality of Kalundborg?**

As a principal rule you have to keep an attitude of wait-and-see and just act as problems arise or the legislation orders it

9,2% 

Already now you should act and prepare long-term plans that take the expected climate changes into account

90,2% 

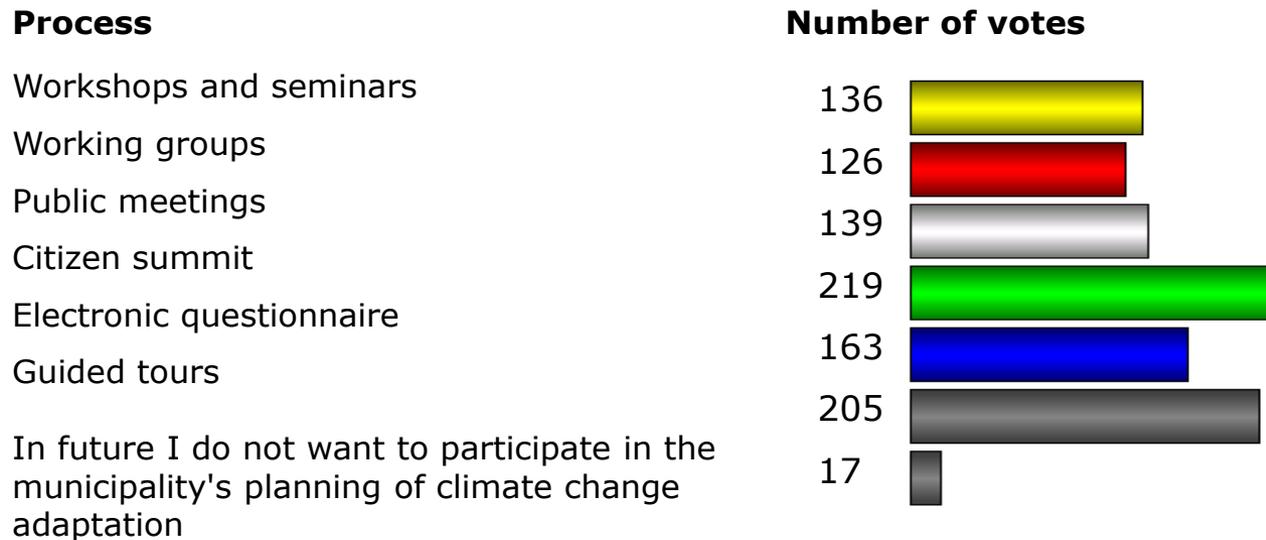
Do not know

0,6% 

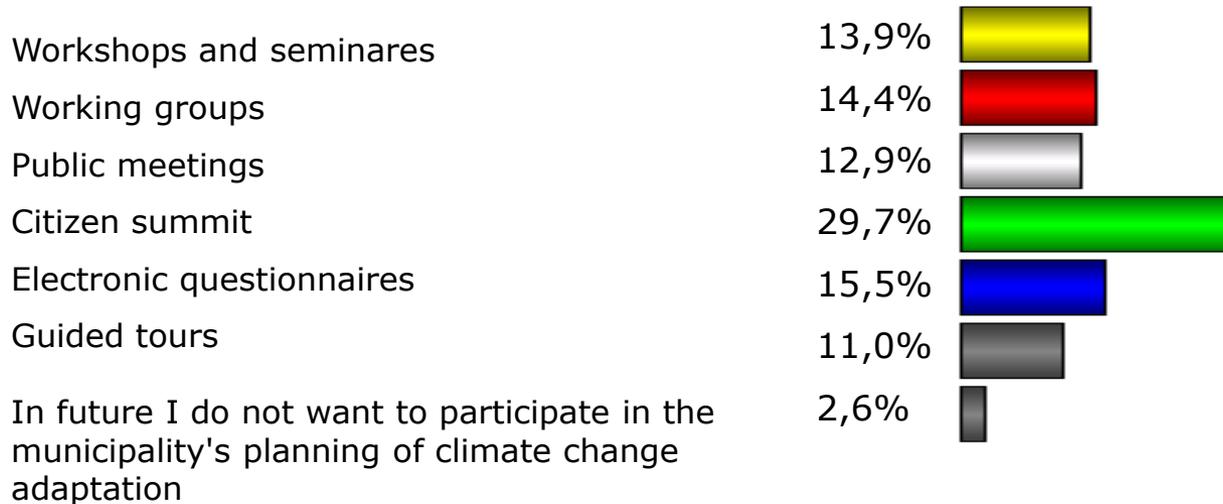
## 6. The citizens involvement in the planning of climate adaptation

In this round of the debate we will ask you to discuss how the citizens in the future should be involved in the municipality's planning of climate change adaptation. There are different methods for involvement of the citizens in the local authorities' planning, but it takes time and efforts if you as a citizen has to be involved. There is however a difference between how demanding the different methods are. To what extent would you as a citizen be interested in involving yourself in the adaptation of the future climate?

**Question 6a: When it comes to the municipality' continuing work with climate adaptation, in which of the processes mentioned below could you imagine to take part? (you may vote one time per option)**



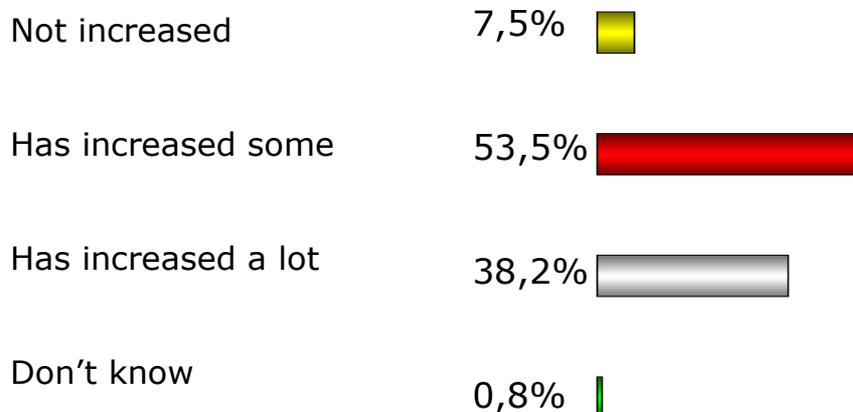
**Question 6b: If you could take part in *one* of the following activities which would you prefer? (you may vote only once)**



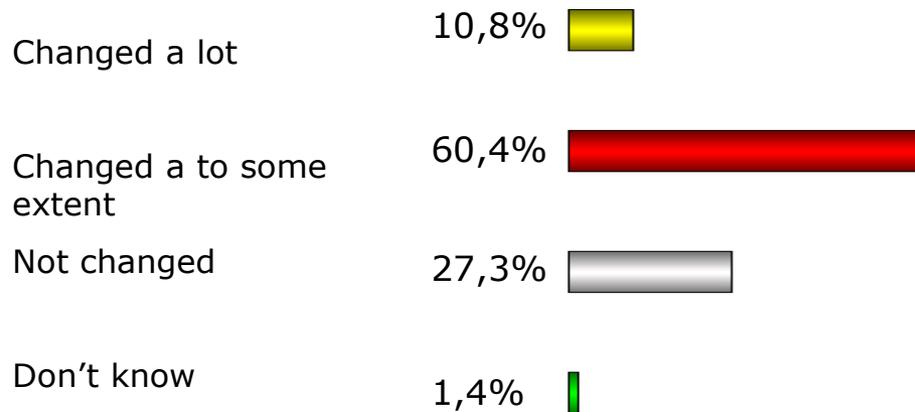
What did you gain by participating?

Has your participation in this citizen summit and the reading of the background material increased your knowledge about or influenced your attitude to climate changes?

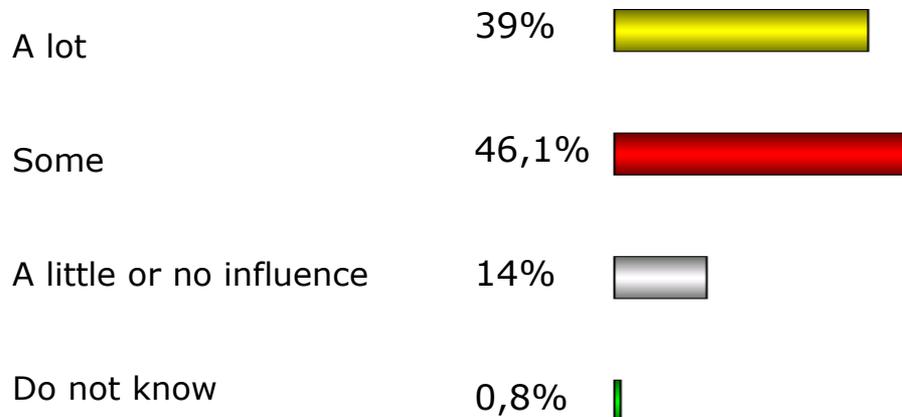
**Question 6c - My knowledge about the consequences of climate changes has**



### Question 6d – My opinion on how citizens and/or public authorities in Kalundborg should react on the climate changes has



### Question 6e – to what extent do you think that the climate changes will have an influence on you and your closest relatives?



## Question 6f - Do you need more information or guidance about climate adaptation than what you already know or have access to?

