



Issues related to ***Public Perception*** of Radioactive Waste Management options

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¹ The opinions expressed here are those of the author and may not necessarily reflect the views of the European Commission



The problem

- Measuring things often influences what you are measuring.
- Measuring the Public's perception of an issue is very difficult.
- Asking people their views about issues can clearly influence the results you obtain.
- Should we allow the results obtained from some surveys to influence major policy decisions?

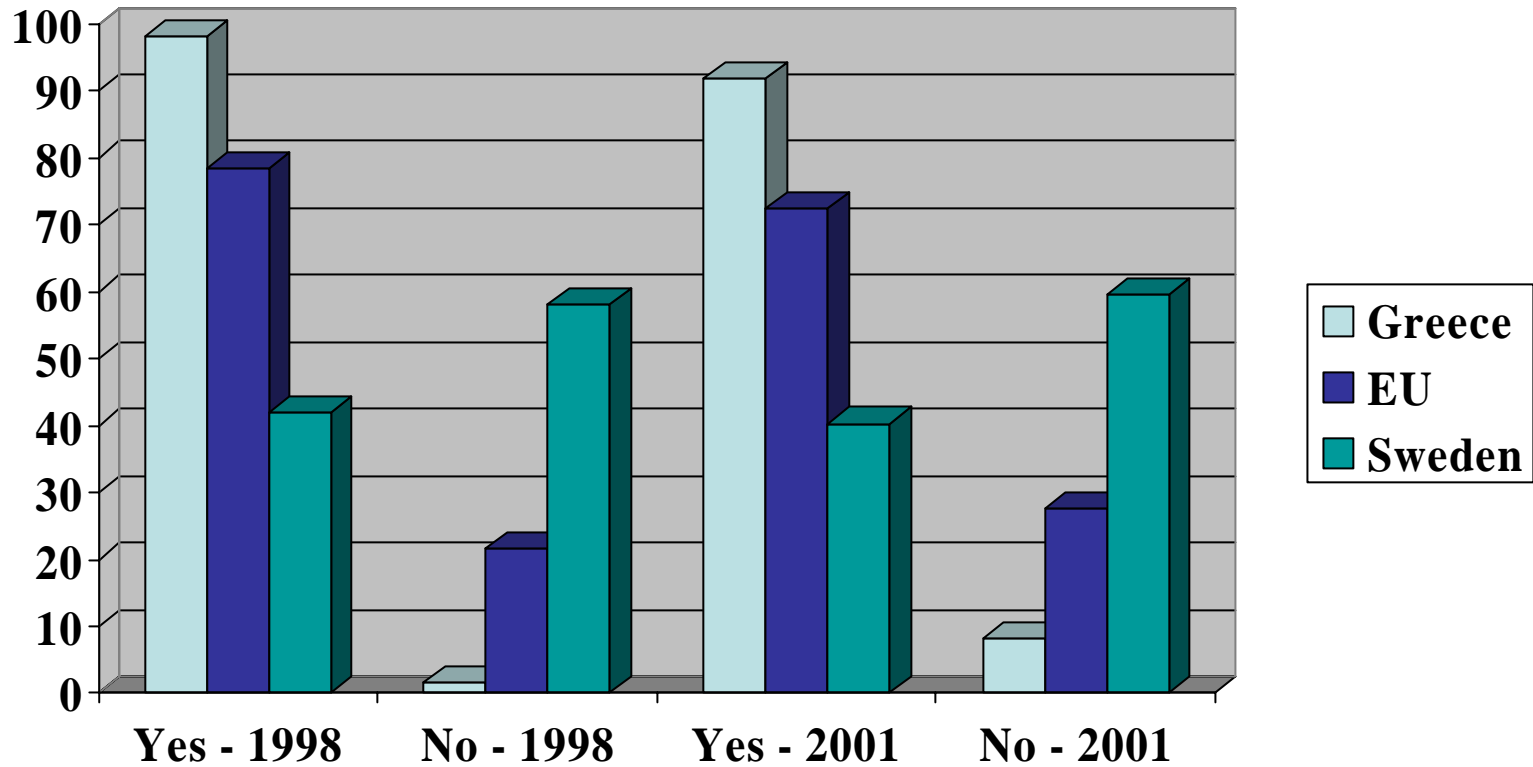


“The health warning”

“Inappropriate use of Public opinion survey’s about nuclear energy or nuclear energy-related issues could lead to more rapid global warming!”



Question: *Are you worried about radioactive waste?* (1998 and 2001)





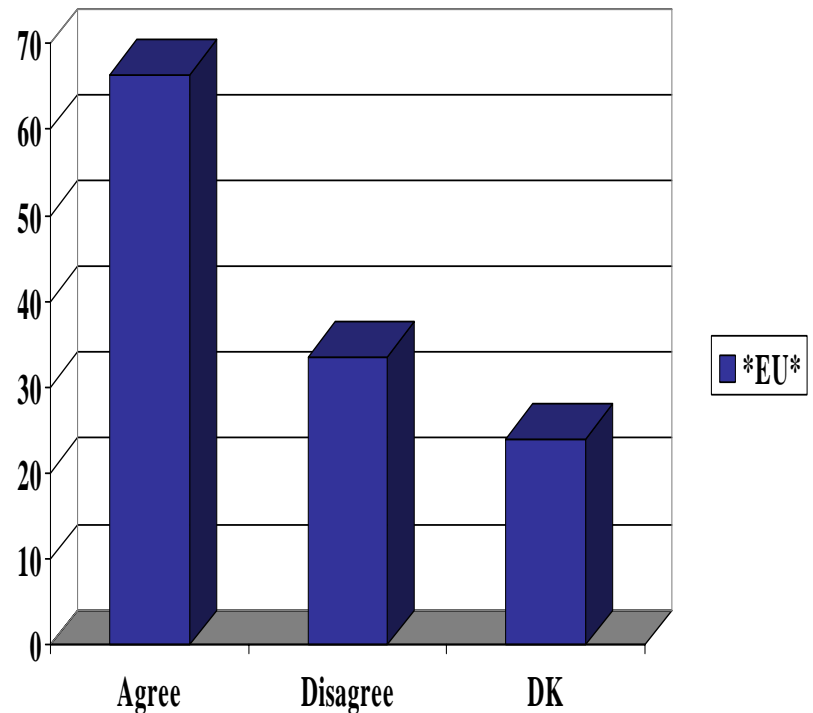
Level of knowledge

- People do not believe that they are well informed about radioactive waste
- Certainly, only a very small percentage of the Public are knowledgeable about radioactive waste.
- One person in eight realise that the large majority of low-level waste is already disposed of by shallow burial (16% in FR)
- Half the people believe we have not disposed of high-level waste “because there is no safe way to do it”



But in spite of this

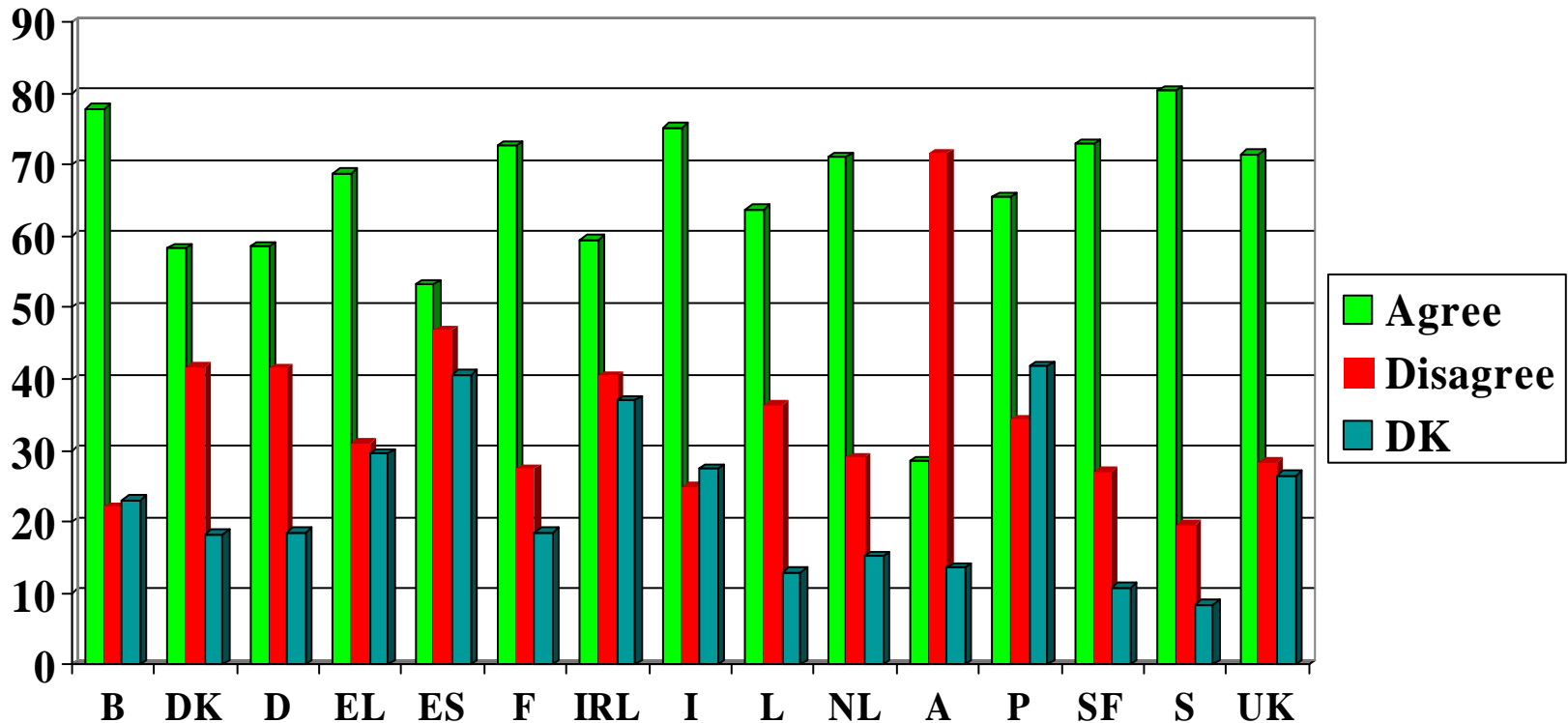
- Statement:
“If all waste were safely managed, nuclear power should remain and option for electricity generation”





Only one Member State against ...

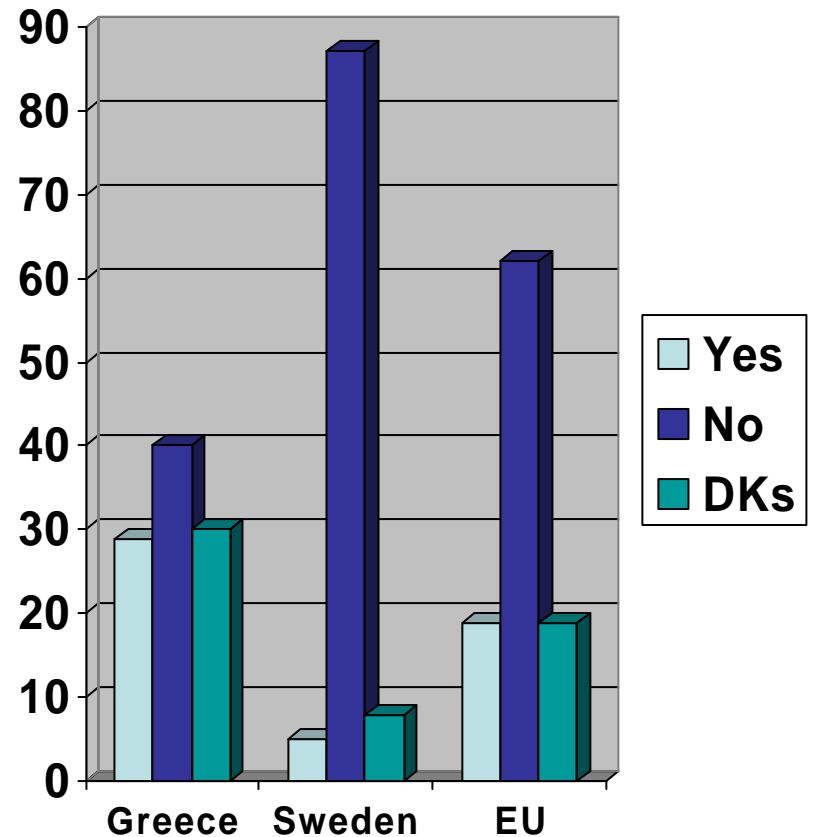
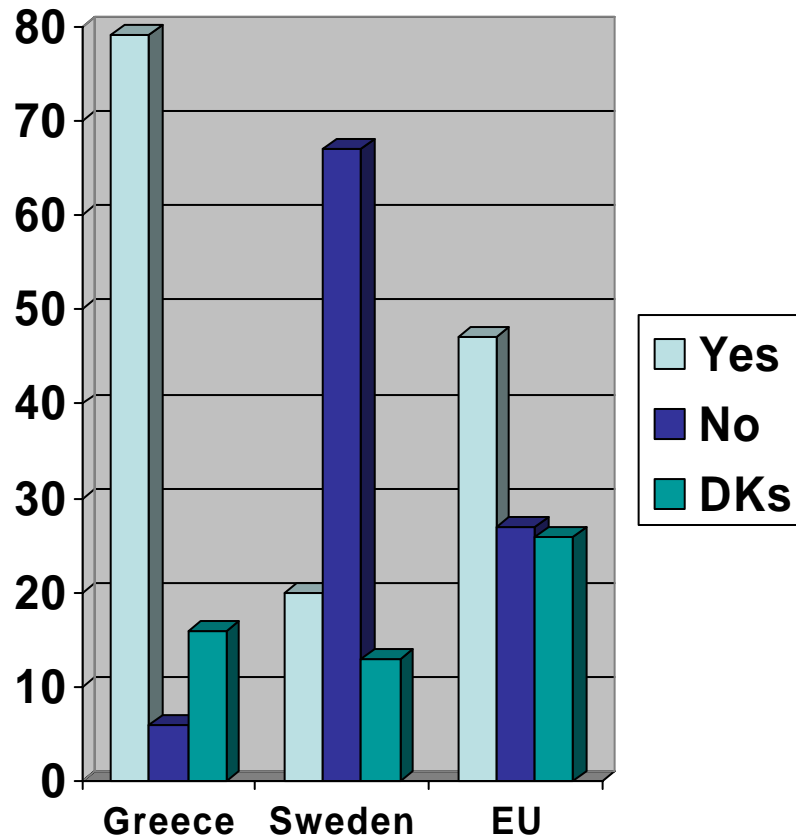
(no prizes for guessing!)





An important evolution from: 2001 to 2005

“Nuclear contributes to global warming”





Are you concerned about?

- In our 1997 survey the greatest concerns of people were (in **descending** order):
 - “Factories”
 - “Global pollution”
 - Oil
 - Industrial waste
 - “Agriculture”
 - Cars
 - Nuclear waste
- Out of 12 items**



But in 1999

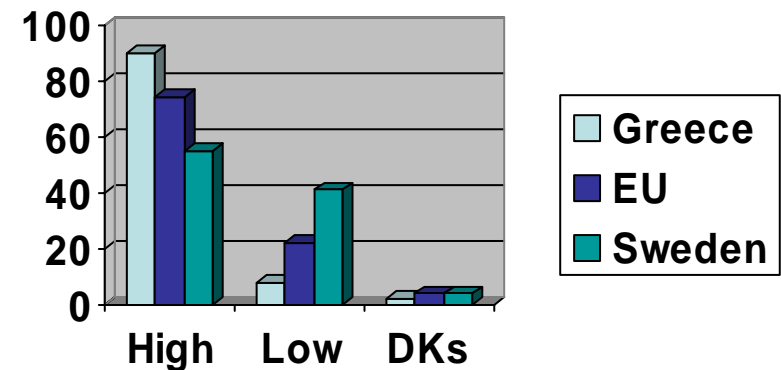
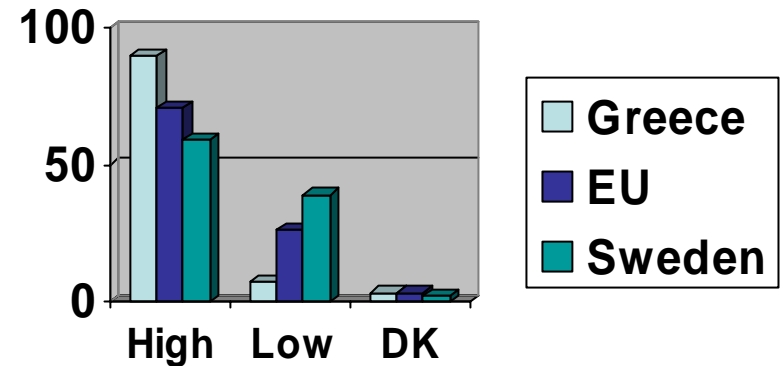
- It came 4th in the list:
 - “Pollution” (47%)
 - Destruction of ozone layer (44%)
 - Disappearance of tropical forests (39%)
 - Nuclear power stations and radioactive waste processing (39%)

Out of 9 items
- And in 2002 it was 1st out of 25 items ...
 - With “climate change” in 11th place
- But it was not included in the list of 15 items in the 2005 questionnaire



“Nuclear” equates to “*risk*”

- Question:
“Do you think the **transport** of low-level radioactive waste is something that represents (level of risk).....?”
- Question:
“Do you think the **storage** of low-level radioactive waste is something that represents (level of risk).....?”





An aside: Who worries most?

- In the 2002 survey, there was a “league table” of “very worried States”.

Greece – 58%*

Luxembourg and Italy – 44%

Portugal and France – 41%

UK – 32%

Austria – 31%

Germany and Denmark – 30%

Spain, Ireland and Belgium – 26%

Sweden – 25%

Finland – 24%

The Netherlands – 21%

- * The Greeks worried more **about every single item** on the list of 25 than any other State



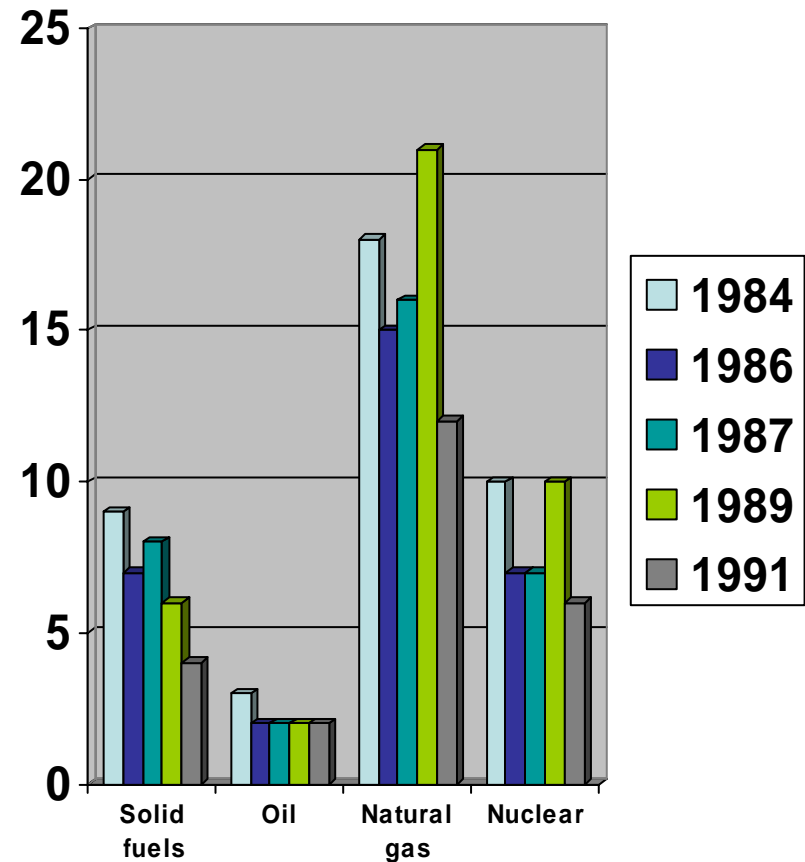
Are you concerned?

- How many people do you think might be concerned by “***nuclear*** magnetic resonance”?
- Or concerned by “all forms of electromagnetic ***radiation***”?



Is nuclear seen as the most polluting energy source?

- In a series of surveys from 1984 to 1991 the question was asked “which is the least polluting source of energy”.
- Renewables were clear favourites – but on average nuclear came 3rd behind natural gas.
- Note: This period includes the Chernobyl accident (1986)





and Price and Security of Supply?

In the period 1996 to 2006 Which fuel would give....	Most stable price?	Most secure supply?
Gas	32%	29%
Renewables	21%	25%
<i>Nuclear</i>	<i>12%</i>	<i>15%</i>
Oil	9%	9%
Solid fuels	10%	8%



***“We want renewables*”**

but.....

- The **large majority** of people in the EU think we should reduce our dependency on imported oil by turning to greater development of renewables
- ***BUT*** asked if they were willing to pay more for renewable energy
- 54% - ***“NO”***
- 27% - up to 5% more
- 11% - up to 10% more
- 2% - more than 10% more

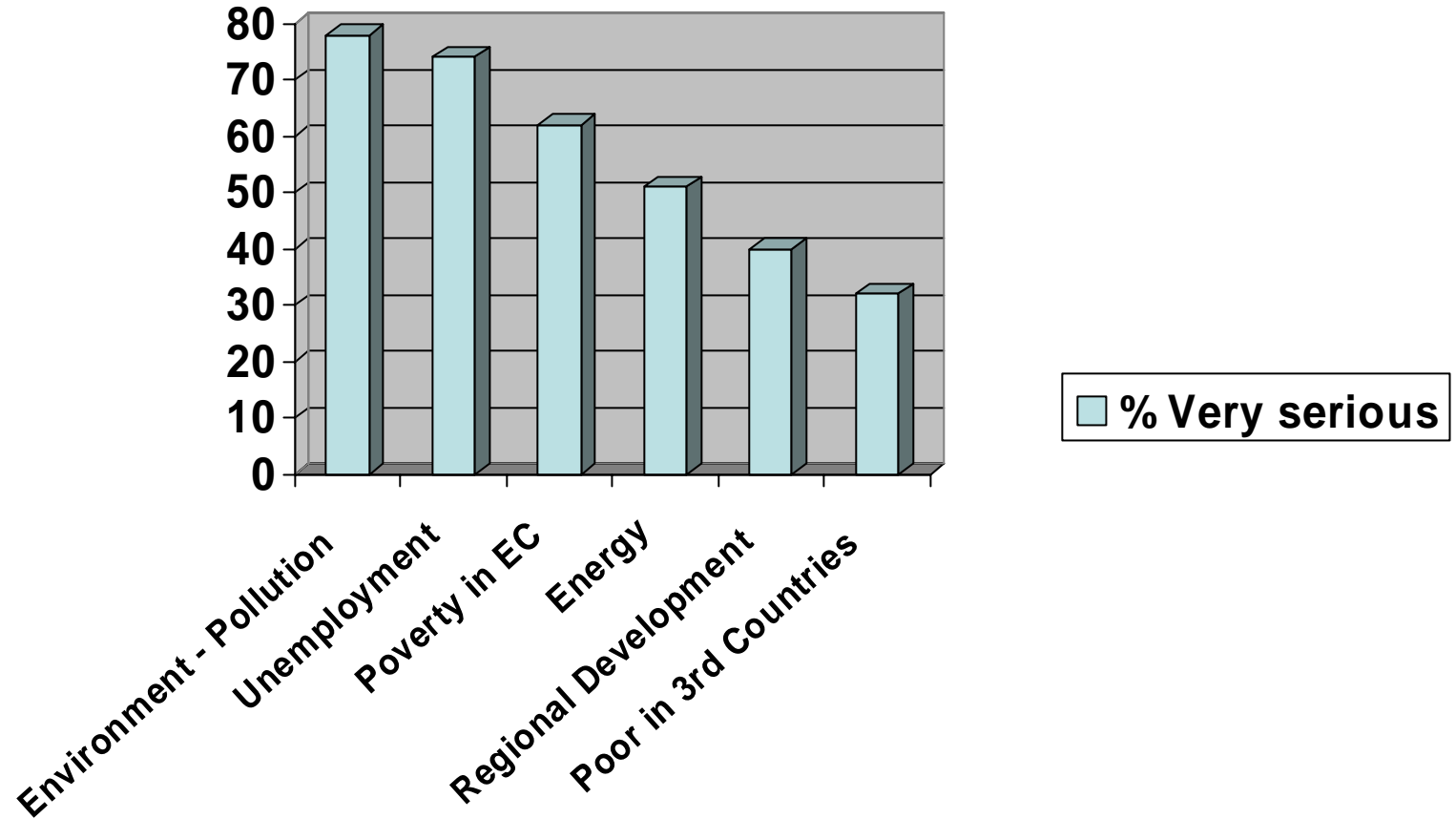


Who thinks about energy?

- We are not sure how concerned people are about energy – relative to other issues – as we have not asked them since 1989.....
- In 1989 we included energy in a list of six issues – it came in fourth place in the Public’s concern about “very serious issues”

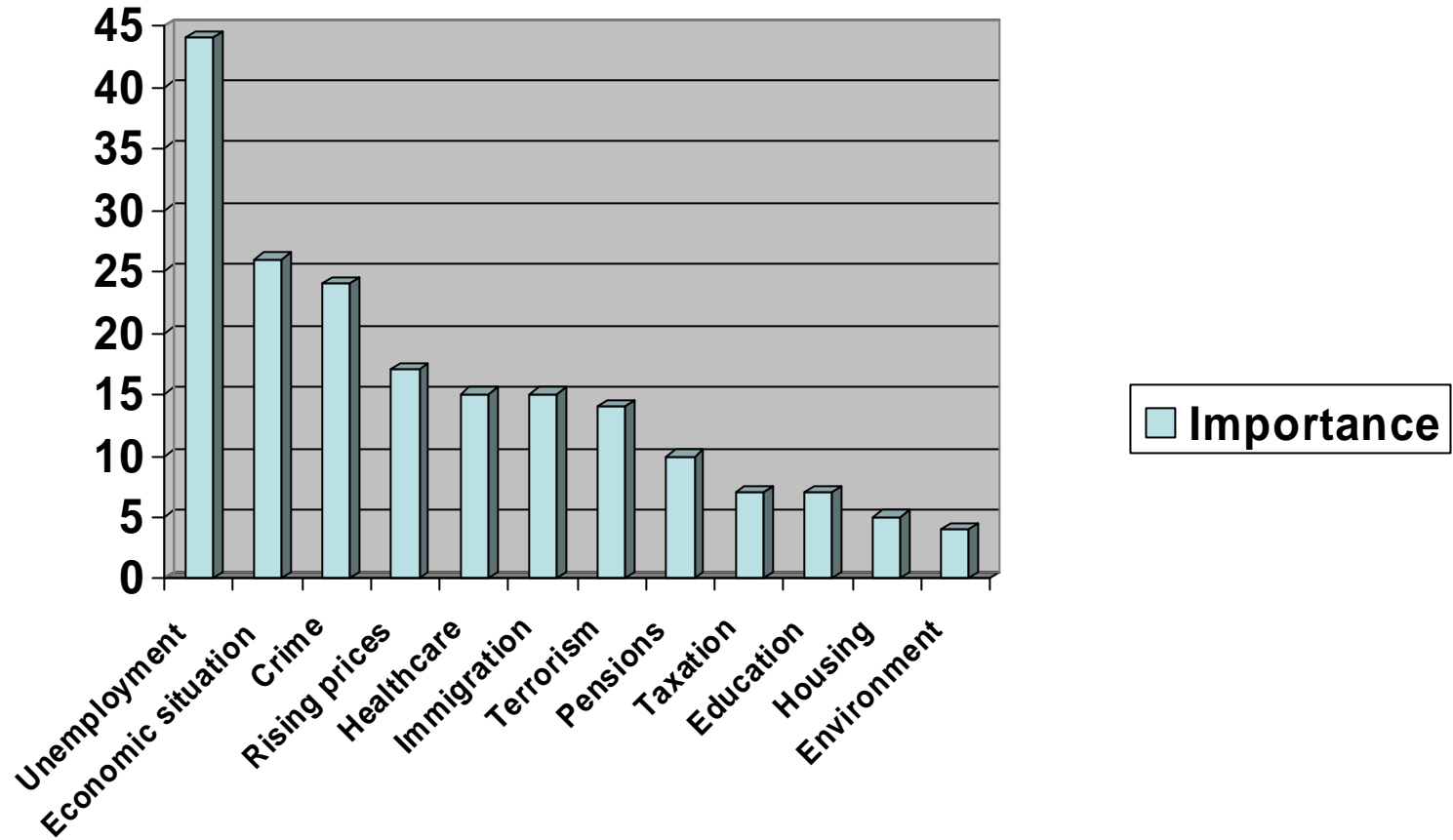


Public's opinion in 1989 on six issues





Public concerns in 2005





Elementary logic.....?

- Environment is not one of the Public's main concerns
- Environment is more of a concern to the public than energy
- Nuclear energy is perceived as less polluting, cheaper and more secure than coal and oil
- ***So, how important an issue is radioactive waste to the man (or woman) in the street?***
 - Especially when they know so little about it.



Some simple conclusions

- Energy is not a major preoccupation with the Public
- Nuclear energy is not seen as the most polluting form of energy
- People like the idea of renewable energy as the least polluting form of energy
- But people are not willing to pay more for energy which is less polluting
- People express concerns about radioactive waste – but know little about it
- But if they thought that the waste could be safely managed they would more easily accept nuclear energy.



Can we change the Public's perception? ***Possibly!***

- The public is not well informed about radioactive waste
- Those poorest informed about nuclear issues are most likely to react most negatively to questions concerning questions on nuclear or radioactive wastes.
- The public say they want to know more about waste.
- Those countries where nuclear has been very well discussed and debated have the least concern over radioactive waste.

Therefore:

- ***Changing the Public's perception is possible – but it will require a lot of information, time and effort.***



But should we try?

- **NO**

- Almost certainly not. It is likely that the *general public's* feelings about nuclear are not that strong or focused on nuclear issues. If they want information there is more than enough out there.

- **YES**

- Definitely in *site specific* cases – such as when there are plans to construct a new facility. Then it will be a question of addressing, often very specific, local concerns – many of which may have little to do with “radioactivity” as such.



Finally

- Be aware.....

Be very aware

– Of the:

- » Severe limitations
- » Potential errors, and
- » Possible misinterpretations
of opinion surveys

.....especially when taking important
policy decisions!