

### Chapter 3

#### THE SPECIAL EUROBAROMETER 227 – REPORT ON “RADIOACTIVE WASTE” 2005

An opinion poll was conducted in 2005 by the European Commission as part of the Eurobarometer series. The report analyses Europeans’ perception of issues associated with nuclear power and radioactive waste. In each country, a series of questions was put to a representative sample of the national population aged fifteen and over. In all, 24 708 people were questioned in the 25 EU Member States.

The *Special Eurobarometer 227 – Report on “Radioactive waste”* [4] has been used in this study to explore the level of knowledge and the opinions of the public on the issue of radioactive waste disposal, because it is an especially rich source of data. Consistent questions were asked across 25 countries, allowing direct comparisons to be made. While the data from surveys are available in many countries, the differences in the questions asked make general interpretations much more difficult.

The findings of the Eurobarometer 2005 Report are outlined below. Specific points relevant to the present study are as follows:

- Six out of ten Europeans acknowledge the benefits of nuclear energy supply, reducing dependence on oil and lowering greenhouse gas emissions. This recognition is significantly higher in countries which already have nuclear power plants. However, it still leaves a significant fraction which does not recognise these benefits.
- Only 37% are in favour of the use of nuclear power, compared with 55% who are opposed. However, if the issue of radioactive waste were considered to be resolved, support for nuclear power would rise to 58%.
- Europeans consider themselves not well informed about radioactive waste management. They tend to greatly overestimate the volumes of radioactive waste arisings compared with the volumes of other toxic waste, and to overestimate the risks associated with the storage and transport of even low level radioactive waste.
- Citizens almost unanimously believe that decisions for solving the problem should be taken now rather than left for future generations. They want to be directly involved in decisions about the construction.
- They recognise that it is politically unpopular to make such decisions.
- The statement that deep underground disposal is the most appropriate solution for the long-term management of these materials is accepted by 45% of respondents, whereas 38% disagree.
- Eighty per cent agree with the statement there is no safe way of getting rid of highly radioactive waste.

There is a danger, of course, that these European data do not reflect the position in OECD countries in other continents. However, the outcome from a recent survey in Canada shows a similar pattern, in as much as very limited comparisons can be drawn [36]. (See Appendix 4.7) This, together with the country reports and other examples, suggest that the issues are broadly similar with the publics of all OECD countries.

Six out of ten Europeans acknowledge the benefits of the use of nuclear energy as regards diversification of energy supply, reducing dependence on oil and lowering greenhouse gas emissions (Figure 3.1). Nevertheless, only 37% are in favour of the use of nuclear energy, compared to 55% who are opposed (Figure 3.2). However, if the issue of radioactive waste were considered as resolved, 38% of those who are opposed to the use of nuclear energy would change their opinion. Combining the responses to these questions it appears that a majority of European citizens (58%) would be in favour of the use of nuclear energy, while 31% would remain opposed, if the issue of radioactive waste were considered to have been resolved. The data suggest that the benefit of implementing HLW disposal in Europe would be a 20% increase in public support towards the use of nuclear energy (Figure 3.3).

In general, 75% of Europeans consider themselves not well informed about radioactive waste management. There are a number of misconceptions apparent from the responses which have a significant bearing on how radioactive waste management policy might be formulated and implemented. Eighty per cent of all Europeans think that all radioactive waste is “very dangerous” (in fact, most waste is only slightly radioactive). Seventy per cent believe that the storage and transport of even low level radioactive waste represents a high risk (Figure 3.4). A majority correctly appreciate that radioactive waste is produced by hospitals and general industry, but few have any idea about the volumes involved. Half of respondents think that “radioactive waste is produced in similar quantities to other dangerous waste”, whereas in reality it is only a tiny fraction (Figure 3.5).

Eighty per cent of Europeans believe that “there is no safe way of getting rid of HLW” (Figure 3.6). Sixty per cent of Europeans believe that radioactive waste is currently buried deep under ground (in the EU, only Finland has decided to proceed with implementing underground disposal for highly active waste). Fifty per cent believe that radioactive waste is sent to other countries (no country proposes to bury wastes abroad). Thirty-five per cent of citizens think that waste is dumped into the sea, although this practice stopped in 1983.

The perception that deep underground disposal is the most appropriate solution for the long-term management of high-level radioactive waste is accepted by 45% of respondents, whereas 38% disagree (Figure 3.7). EU citizens are fairly unanimous (8 out of 10) in highlighting existing doubts about current management procedures, since “there is no safe way of getting rid of highly radioactive waste”.

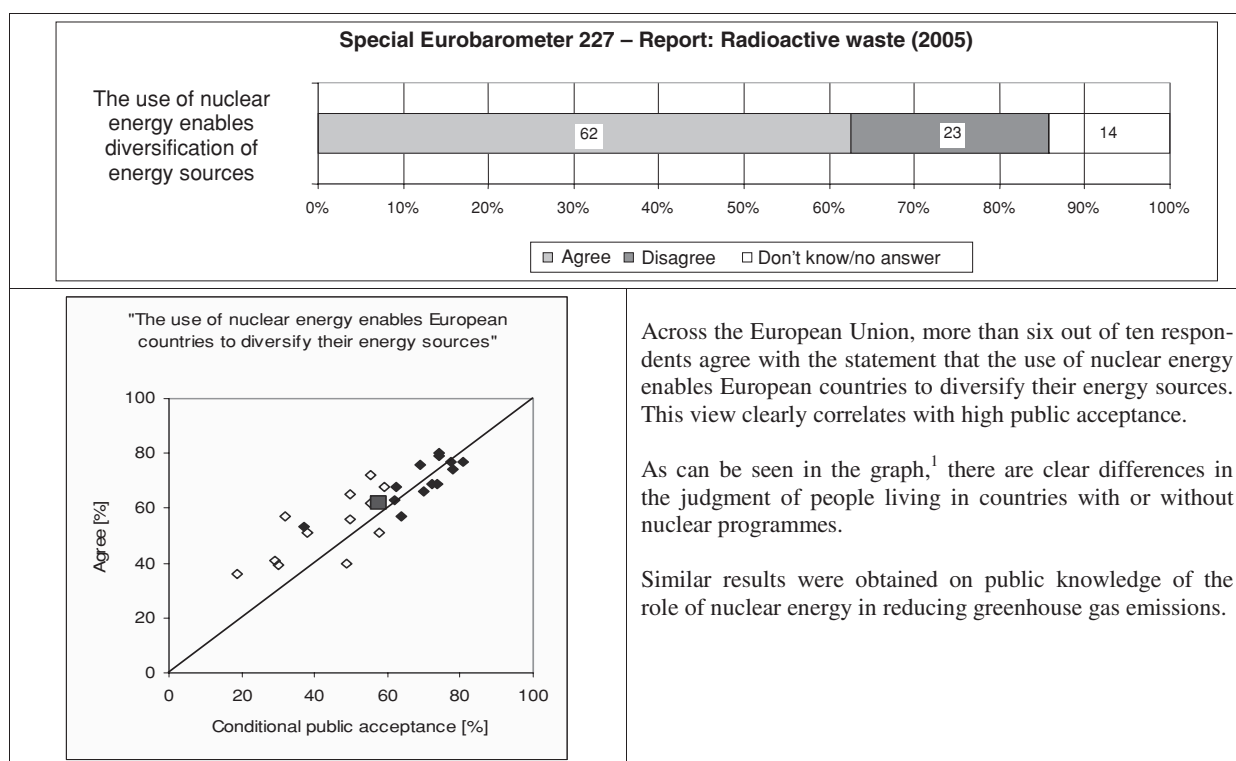
Citizens almost unanimously believe that decisions for solving the problem should be taken now. Further they also consider that they should be directly involved in decisions about the construction of underground disposal sites (Figure 3.8). Eighty per cent agree that taking decisions about the handling of any dangerous wastes is politically unpopular.

In summary:

- Significant fractions of the population do not recognise the benefits of nuclear power in enabling diversification of energy supplies and reduction of carbon dioxide emissions. If the public does not appreciate the benefits they are less likely to tolerate the disbenefits, such as the need to dispose of radioactive wastes.

- Countries with operating NPPs are, in general, better informed and more supportive of nuclear power than those without.
- For a number of key questions on radioactive waste, however, there is limited or no discernable difference between nations with or without nuclear power.
  - A solution for HLW should be developed now and not left to future generations.
  - The desire for involvement in the decision making process for a repository proposal in their locality (59%).
  - They believe that there is no safe way to dispose of HLW (79%).
  - The low level of agreement that deep underground disposal is an appropriate solution (45%).

**Figure 3.1 Public knowledge of role of nuclear energy in diversification of energy sources**



**Figure 3.2 Public acceptance of nuclear energy**

A majority of citizens in the European Union still oppose nuclear energy. However, another 21% of the public would be in favour of nuclear energy if the radioactive waste issue was solved, which would change the majority situation.

Nevertheless, 57% of opponents of nuclear energy would remain so even if the problems of radioactive waste were resolved.

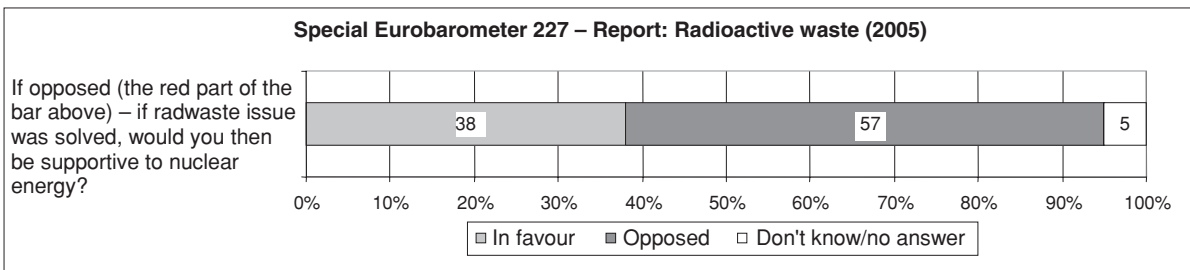
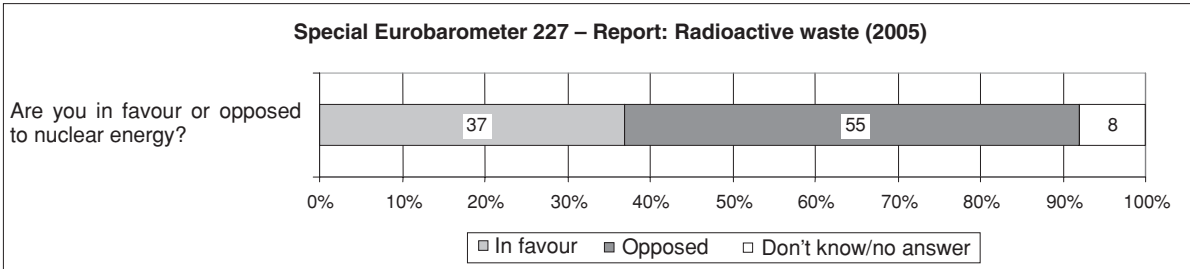
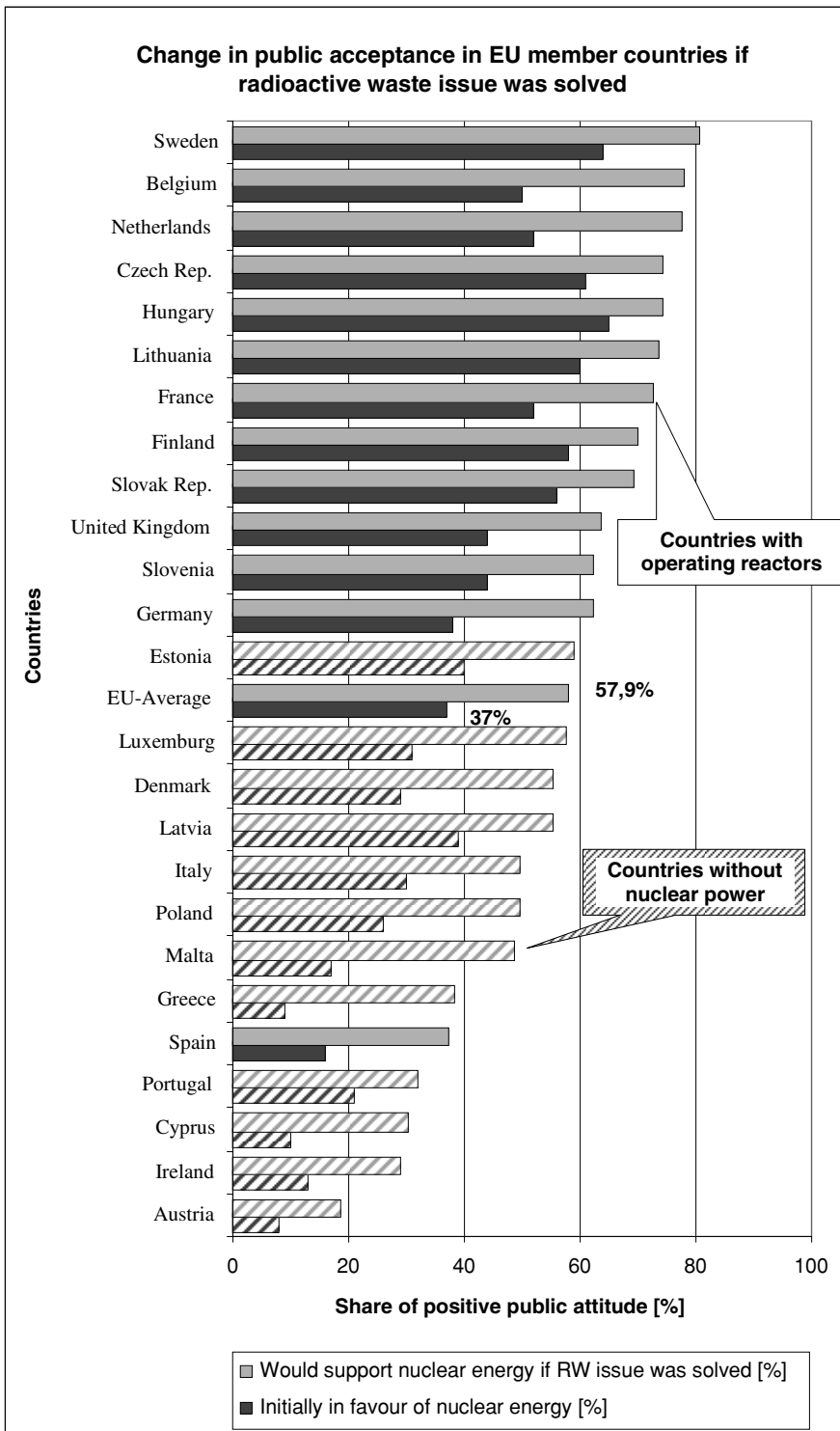
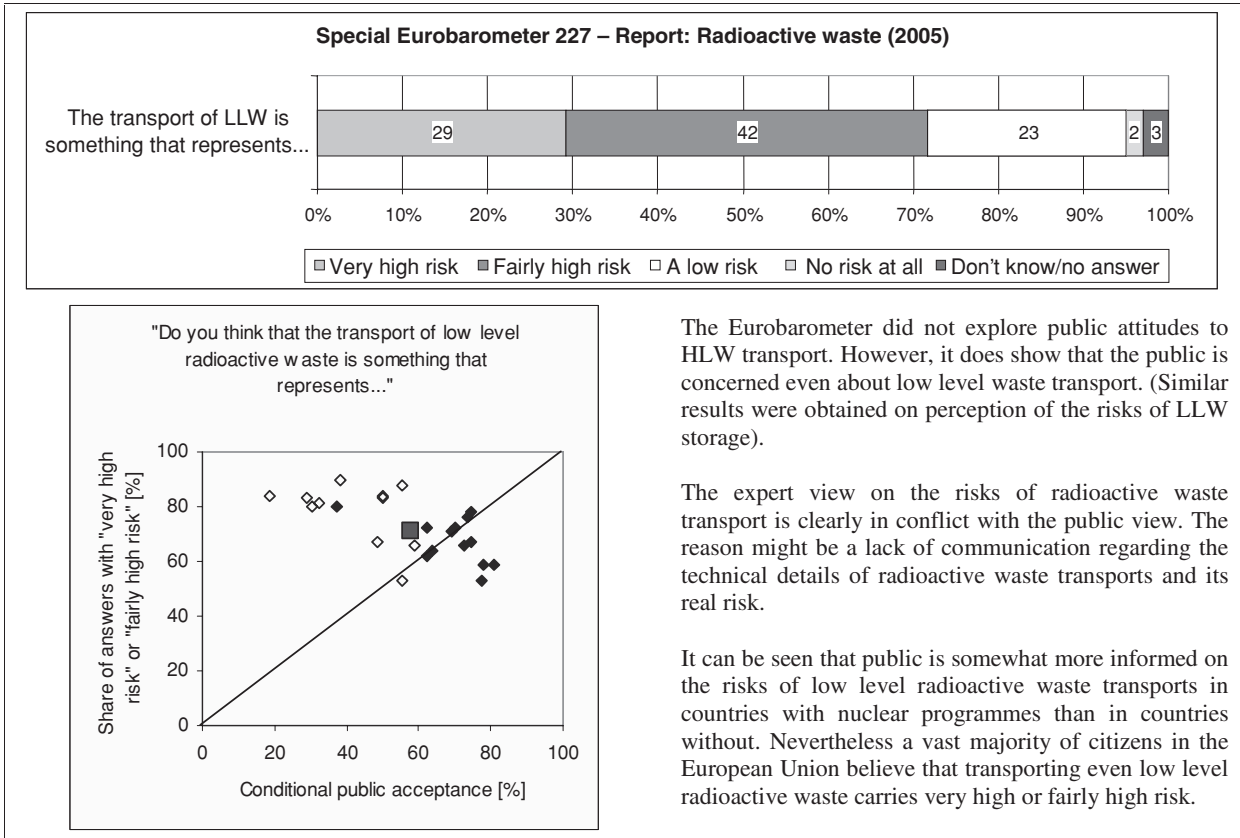


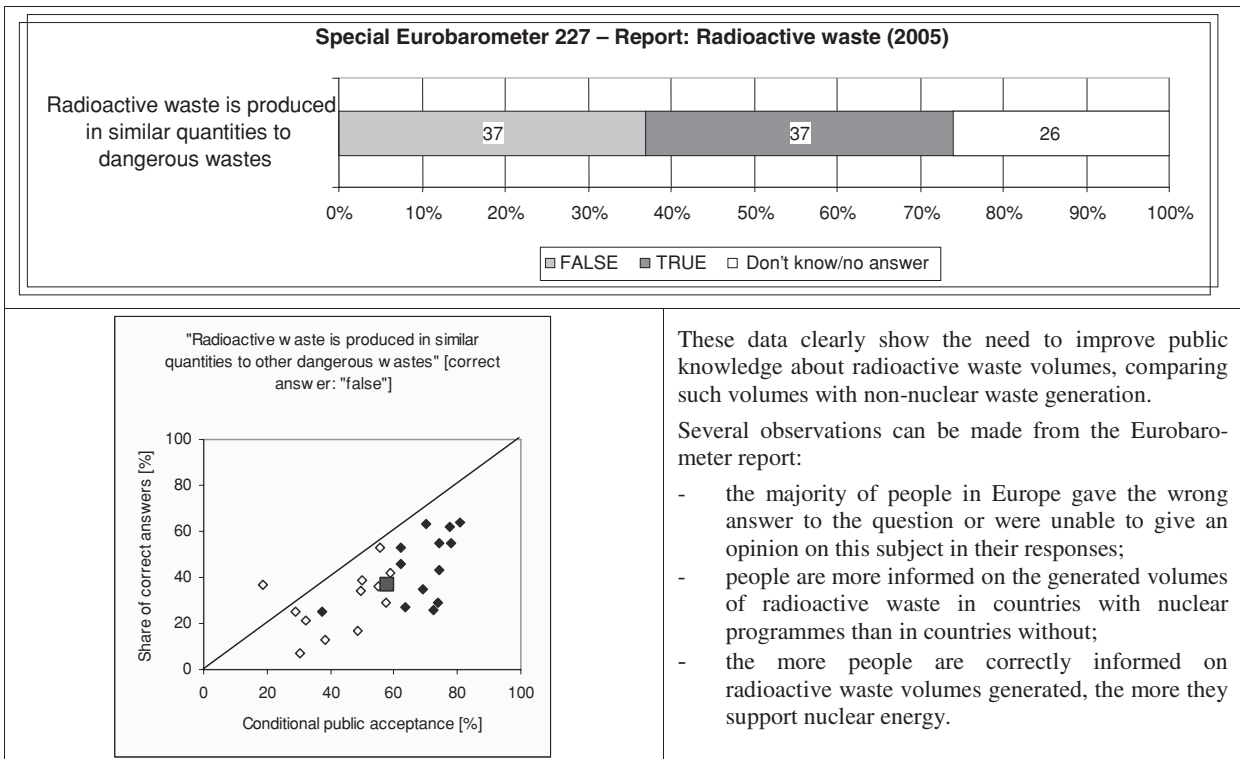
Figure 3.3 Public acceptance benefit in Europe of a HLW disposal solution



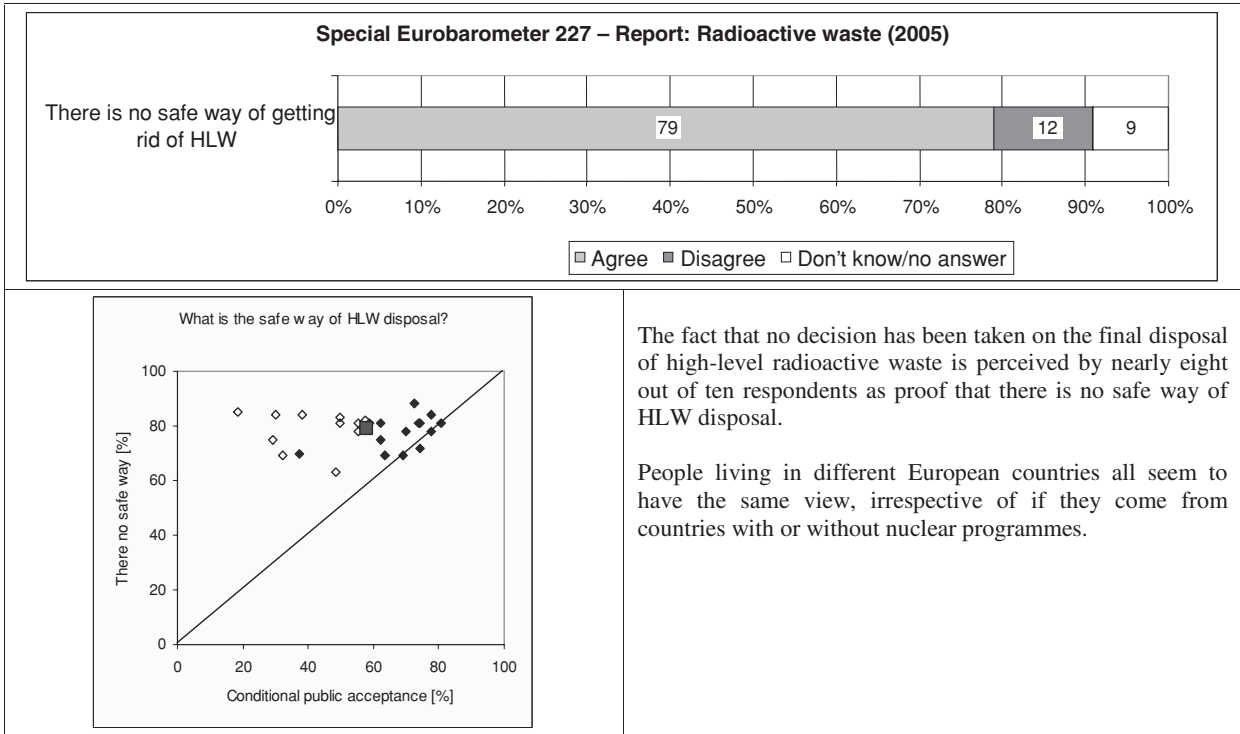
**Figure 3.4 Public knowledge on risk of LLW transport**



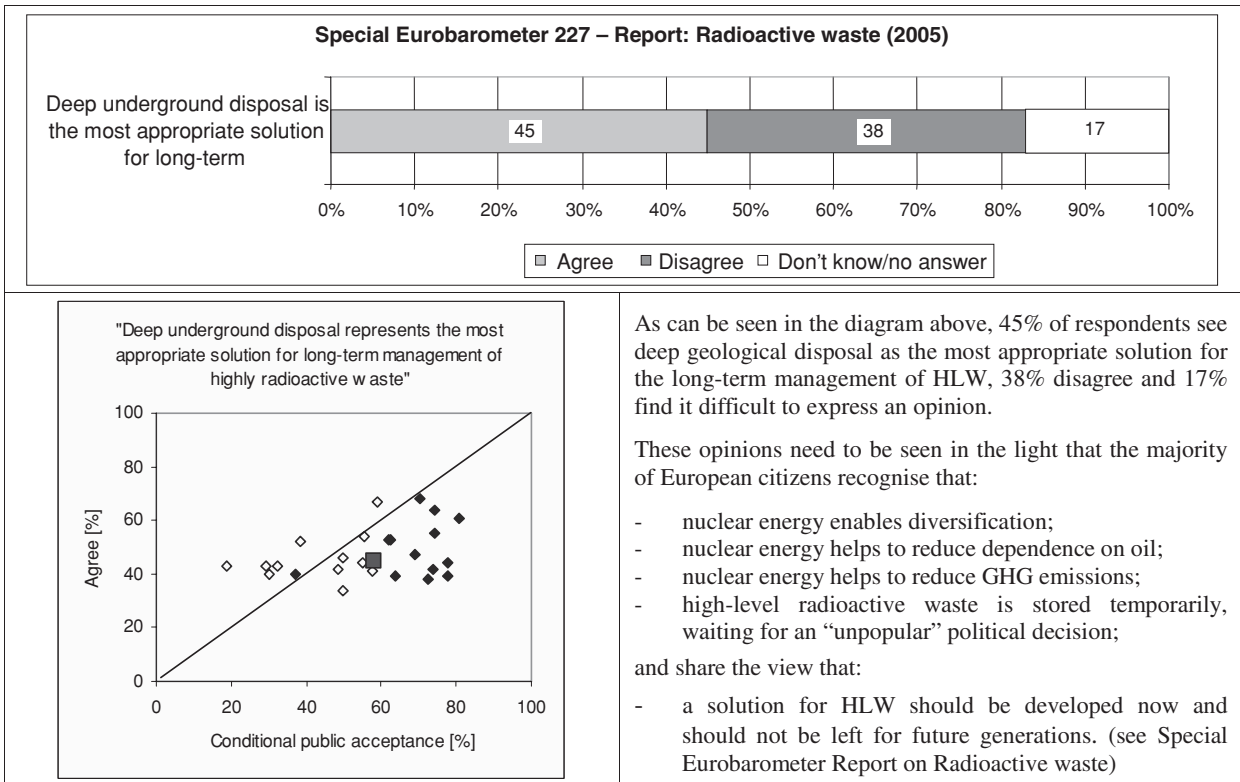
**Figure 3.5 Public knowledge on quantities of radioactive and dangerous wastes**



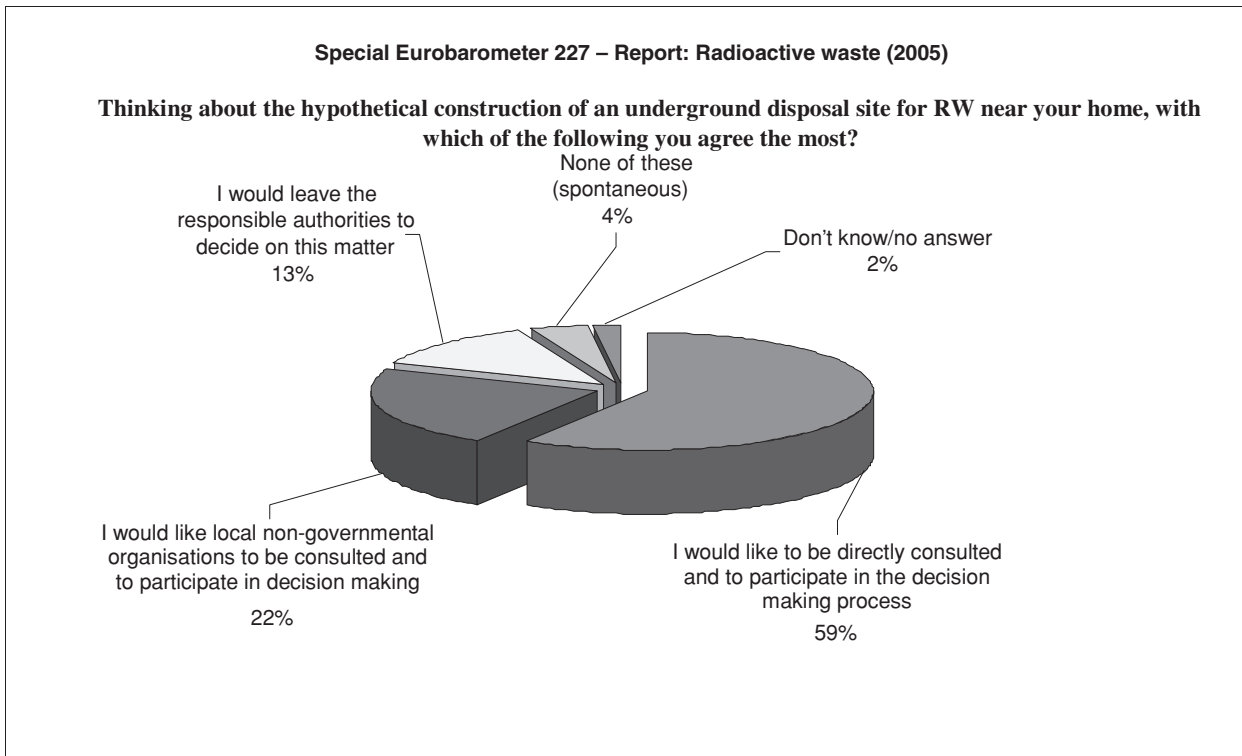
**Figure 3.6 Public opinion on safety of HLW disposal**



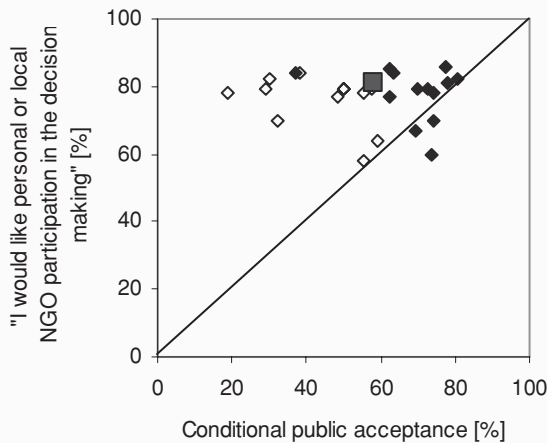
**Figure 3.7 Public opinion on long-term HLW management**



**Figure 3.8 Public opinion on public participation in decision making**



10. "Thinking about the hypothetical construction of an underground disposal site for RW near your home..."



Across the European Union, a majority of citizens would want to be consulted and to play a part in the decision making in the hypothetical case of construction of an underground disposal site for radioactive waste near their home (59%).

Furthermore, 22% of respondents would wish local non-governmental organisations to take part in the consultation and decision-making process in this area.

On this issue there are no differences in the public view in countries with and without nuclear energy programmes. Clearly people will demand to be active stakeholders in the public discussions related to radioactive waste disposal solutions.

This fact amplifies the importance of public participation in the decision-making process and the communication process concerned.



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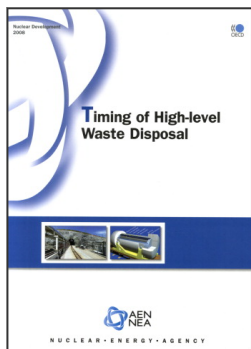
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