

Public Community Support &
Involvement Around Vandellós
ITER Site (EISS-Vandellós
2002/2003).

FINAL REPORT

CIEMAT
R. Solá
A. Prades

UAB
D. Riba
E. Doval
J. Muñoz
A. Garay
C. Viladrich

INDEX

A. OBJECTIVES

B. METHODOLOGY

C. RESULTS

- 1. PUBLIC COMMUNITY SUPPORT** *(Stage 1)*
 - 1.1. Community Profile
 - 1.2. Community Support

- 2. PUBLIC PARTICIPATION PROCESS** *(Stages 2 & 3)*
 - 2.1. Local Inputs** *(Stage 2)*
 - 2.1.1. Conditions
 - 2.1.2. Role
 - 2.1.3. Aim
 - 2.1.4. Actors
 - 2.1.5. Forms
 - 2.1.6. Conclusions

 - 2.2. Surrounding Area Researches Inputs** *(Stage 3)*
 - 2.2.1. Attitudes
 - 2.2.2. Knowledge
 - 2.2.3. Scientific Repercussions
 - 2.2.4. Public Information
 - 2.2.5. Role
 - 2.2.6. Public Participation

 - 2.3. The Aarhus Convention Inputs** *(Stage 3)*
 - 2.3.1. Who must inform
 - 2.3.2. How to inform
 - 2.3.3. Criteria for notification
 - 2.3.3. Minimum Contents
 - 2.3.5. Conclusions

 - 2.4. Theoretical Models Inputs** *(Stage 3)*
 - 2.4.1. Levels and Quality
 - 2.4.2. Conditioning Factors
 - 2.4.3. Requirements
 - 2.4.4. Empowerment

D. CONCLUSSIONS

E. ADDITIONAL TASK: CONTENT ANALYSIS OF THE SPANISH PRESS

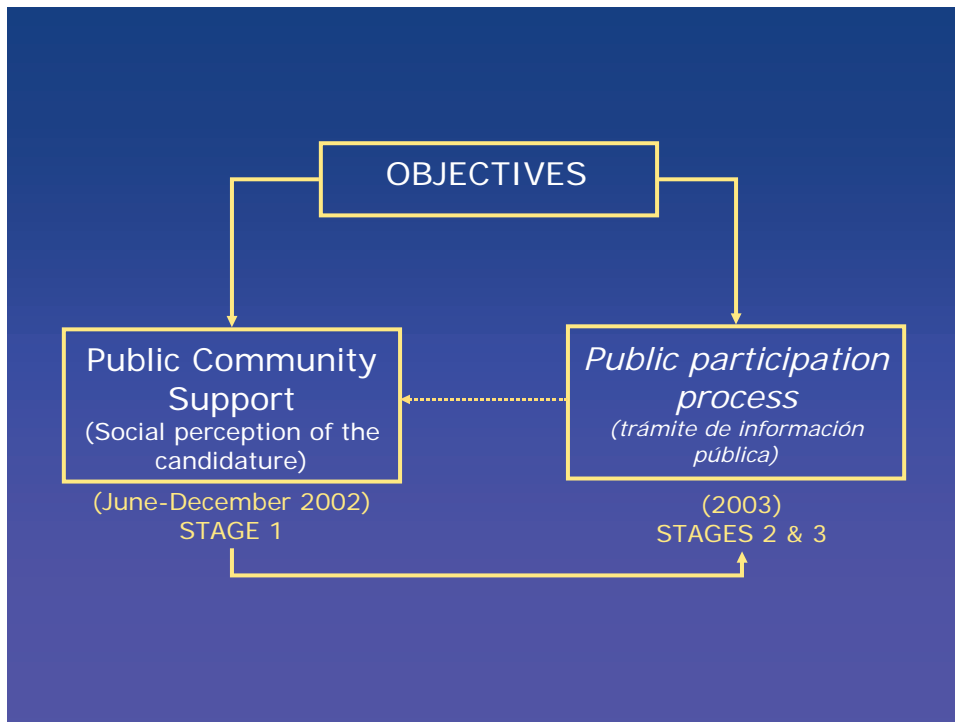
1. Objective
2. Procedure
3. General Results
4. Detailed Results
5. Conclusions
6. Discussion

F. REFERENCES

A. OBJECTIVES

EISS-VANDELLOS studies has focused on two main objectives:

1. The Public Community Support: the social perception of the candidature at the local level
2. The public Participation process that could be established around ITER in case it finally came to Vandellós



The specific objectives of the different researches stages have been the following ones:

Stage 1 (June-December 2002): Analysis of the acceptability of the proposal at the local level as well as the associated local demands. These local demands came out to be: Information, Participation and Planning

Stage 2 (January–April 2003): Analysis of the potential public participation process that could be established around ITER. The research focused on the identification of the locals' concerns and preferences in terms of participation: What aims should the process achieve? Who should take part in the process? When should the process start? And so on.

Stage 3 (July-November 2003): The objective was to go a step forward in the analysis of this potential participation process, taking into account not only the local inputs but also:

- Inputs from the researches of the surrounding area: how do they perceive the candidature? and, what role they would like to play in this potential public participation process?
- The international requirements in terms of public participation, in other words, the international perspective regarding how to manage the practical issues of public participation which are clearly defined in the Aarhus Convention, as we will see later on.
- The theoretical models in terms of public participation

Although not foreseen in our Technical Specifications, the research team decided to accomplish an additional task with the intention of completing our knowledge of the reality under investigation. A content Analysis of the written press was carried out in order to identify the image that the national, regional, local, and economic press spread about ITER, and about the Vandellós candidacy in particular.

B. METHODOLOGY

In order to achieve these goals, a multi method approach, combining both qualitative and quantitative techniques, as well as theoretical studies was applied.

STAGE 1: Social Perception of the Candidature (Local Level)	
QUALITATIVE STUDIES	
21 INTERVIEWS (July – October 2002)	Phase 1: Identification of Key Actors Phase 2: In depth interviews to Key Actors Phase 3: Impact of the EISS-Vandellós project leader talks'
QUANTITATIVE STUDY	
400 participants (October 2002)	CATI (computerized Assisted Telephone Interview) Random selection in the area of influence Confidence Level: 95.5% / Maximum error rate: $\pm 4,9\%$
STAGE 2: Public Participation Process (Local inputs)	
QUALITATIVE STUDIES	
(February 2003)	6 Individual interviews Nominal Group
STAGE 3: Public Participation Process (Regional and International Inputs)	
QUALITATIVE STUDIES	
15 INTERVIEWS (July – September 2003)	Phase 1: Identification of Research Groups Phase 2: Semi-structured Interviews to Key Researches
THEORETICAL STUDIES	
(July – November 2003)	Aarhus Convention Public Participation Models
CONTENT ANALYSIS	
(October – November 2003)	Articles published in the national, regional, local, and economic press from April 2002 to September 2003.

Within the [QUANTITATIVE METHODS](#), we applied a telephone survey to a representative sample of the local population.

The [telephone survey](#) addressed three main issues: Knowledge/information about ITER project; Acceptability of the possibility of hosting ITER in Vandellós; and Public participation. The C.A.T.I. was conducted by RANDOM, Estudios de Opinión, Marketing y Socioeconómicos, S.A. A sample of 400 participants was interviewed. They were over 18 years living in the area of influence: Vandellòs-l'Hospitalet de l'Infant, Ametlla de Mar, Montroig del Camp, Pratsdip and Tivissa. These include the site and all the adjacent municipalities. Fieldwork was performed from October 28th to 31st, 2002. Multi-stage stratified sampling was used. A random selection of households from the five municipalities was followed by a quote sampling by gender and age within the household. Confidence level was 95,5% with a maximum error rate of $\pm 4.9\%$. SPSS (Statistical Package for Social Sciences V.11.5 for windows) was used for data analysis.

Within the [QUALITATIVE TECHNIQUES](#), we have applied individual interviews and a nominal group (some kind of focus group). Although limited on scope (not allowing for generalization), the qualitative approach provides an intensive, more detailed, and explanatory study of our target population. Qualitative methods require direct relations, in a context of dialogue and interaction, with the persons involved in the processes we intend to analyse, i.e. the social actors that might be affected by the possibility of hosting ITER in Vandellós. The methodological approach we applied is close to the one proposed by the “Grounded Theory” (*Glaser & Strauss, 1967; Strauss & Corbin, 1998*).

The [semi- structured interview](#) is the specific qualitative technique applied along the study. A semi-structured interview is: “a conversation between an analyst and an informer in order to obtain his opinions, knowledge, judgments and experiences by means of interaction in a relatively formal context. A fluent and spontaneous dialog is promoted through successive, not questions, but thematic guidelines derived from both the objectives of the research, and the evolution of the interview itself.” (*Patton, 1990*).

The [Nominal Group](#) Technique is a creative technique used in order to facilitate the generation of ideas and the analysis of problems. This analysis is carried out in a structured way, allowing a good number of conclusions to be reached at the end of the meeting in respect of the questions raised. The advantages to this method are: a) It reduces the probability of the appearance of conflicts; b) It allows for the proliferation of a good number of ideas; c) Minority positions are considered, since all the members of the group participate; and d) It guarantees that the success of an idea does not depend on the quality of its explanation.

[THEORETICAL STUDIES](#) on both the Public Participation Models and the International perspectives dealing with practical issues of public participation (Aarhus Convention) have also been carried out.

Finally, a [CONTENT ANALYSIS](#) of written press was also applied. A Coding Protocol was designed in order to cover all major aspects of the information published about ITER (*Krippendorf, 1980*) A total of 195 articles were independently scored by two coders on an electronic record format (SPSS Data Entry V 3.0) The Statistical Package for Social Sciences (SPSS) V.11.5 for windows was used for the data analysis.

C. RESULTS

1. PUBLIC COMMUNITY SUPPORT

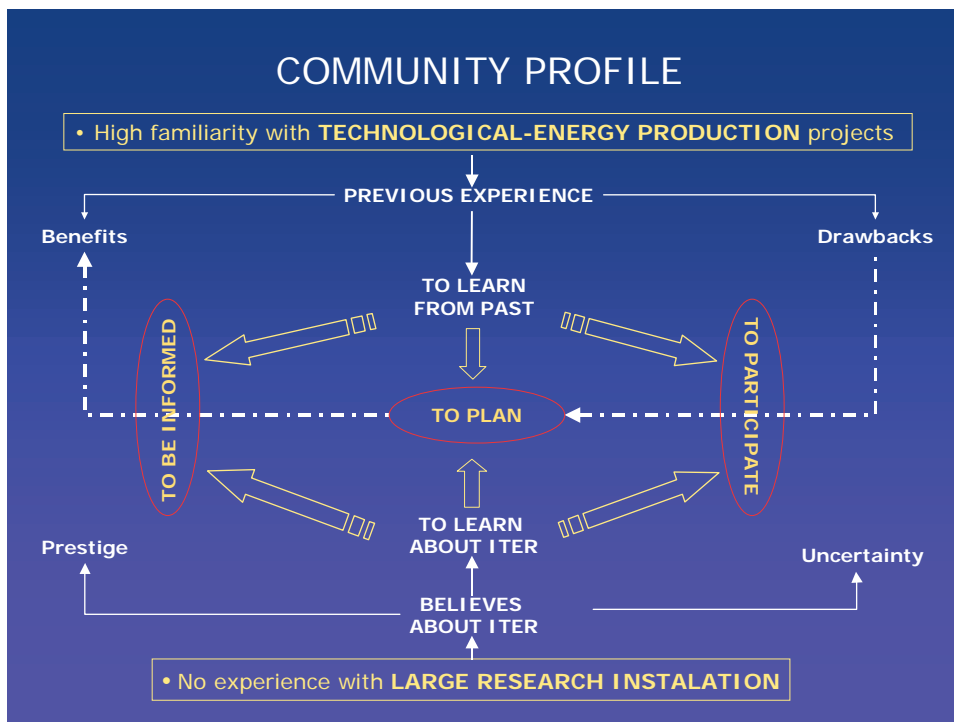
(Stage 1)

1.1. COMMUNITY PROFILE

The very first comment regarding the Community Profile is that we are talking about a very peculiar area in terms of its relation with energy and technology.

On the one hand the area has a high familiarity with technological and energy production systems

Local people have been living with such installations for more than 20 years (and not only with NPP), so they have a strong previous experience in living with high technological systems. This experience makes them very aware of the kind of, both, the benefits and the drawbacks that may be associated to such installations. And therefore a clear need arises: “the need to learn from the past” (in order to avoid past mistakes and promote the potential benefits of such installations).



On the other hand the area has no experience with large research installations.

Therefore, at the moment of our first data gathering, all the locals had about ITER were beliefs about its possible benefits (clearly linked to the prestige it will imply for the area), and its potential drawbacks (directly associated to the unknown and uncertain character of a research installation)

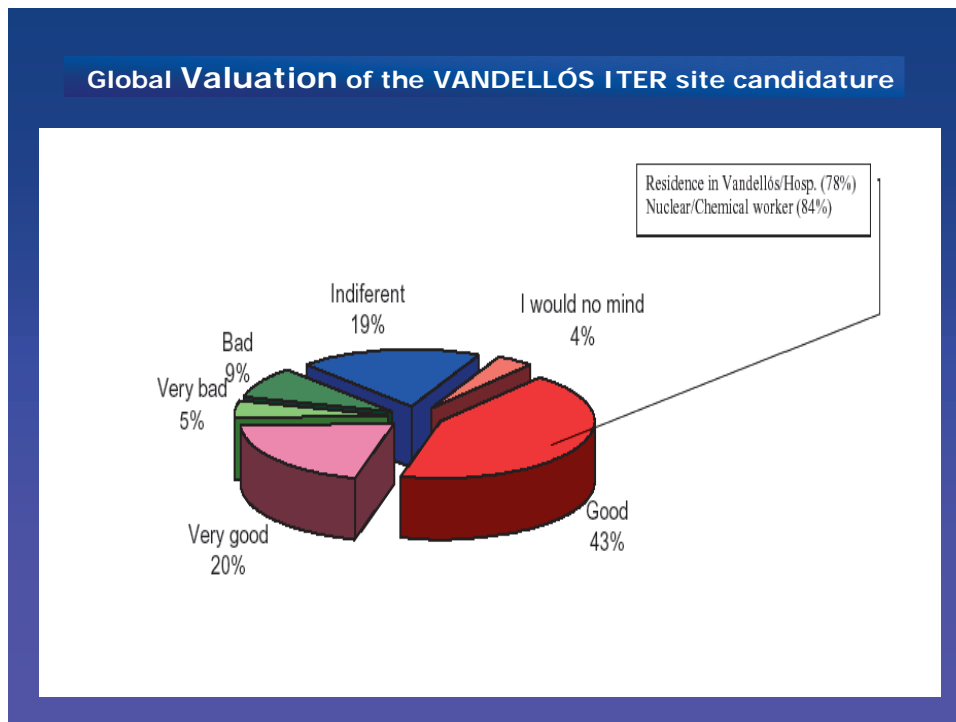
What we found out is a clear need of “learning” from the past and about ITER itself in order to achieve a suitable integration of ITER in its social environment.

In this context, the locals propose three specific social processes as learning instruments: INFORMATION, PLANNING, AND PARTICIPATION. By means of these processes the potential benefits of ITER could be maximized and the drawbacks minimized. And what is more, some of the drawbacks could even be transformed in benefits in the long term.

1.2. COMMUNITY SUPPORT

The results from both, the qualitative and the quantitative studies, are definitive on this issue: the local community wants ITER, this is the slogan that they have themselves produced.

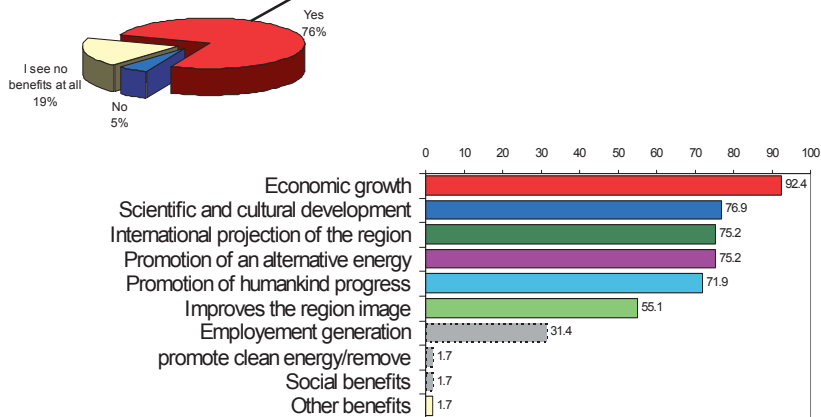
The global opinion towards the candidature is clearly favourable (63% consider it as a good or very good prospect and 20% shows indifference). Good and very good evaluations rise among the residents in L'Hospitalet-Vandellós, reaching 78%.



More than 75% of the sample associated the construction of ITER in Vandellós with clear benefits. The prestige and change of image based on the scientific and cultural development, as well as the international projection of the area, are emphasised among the social benefits. Economic growth is also seen as an important potential benefit.

Benefits associated to ITER at VANDELLÓS

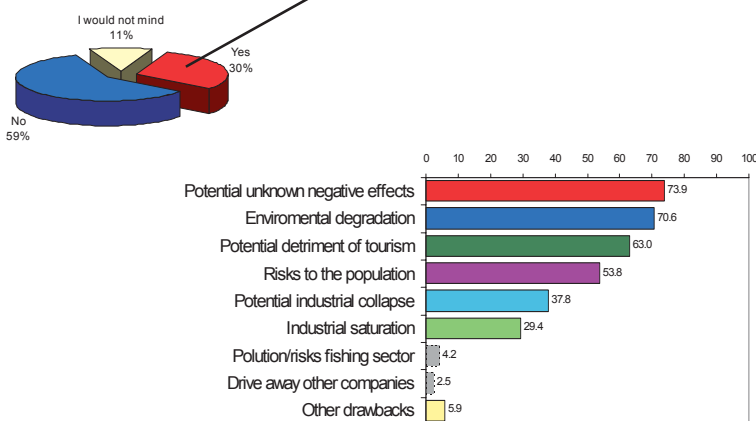
Do you think that ITER will bring some benefits? Benefits associated to Vandellós ITER site candidature



When a critical point of view about the installation was expressed, it was related to the lack of information. Congruently, the main drawback mentioned (only a 30% refer to possible drawbacks) is related to the experimental character of the ITER installation, with possible unknown effects. Thus, **drawbacks** are, of course, perceived but to a much lower level and with the feeling that they could always be minimized or even transformed in benefits in the long term.

Drawbacks associated to ITER at VANDELLÓS

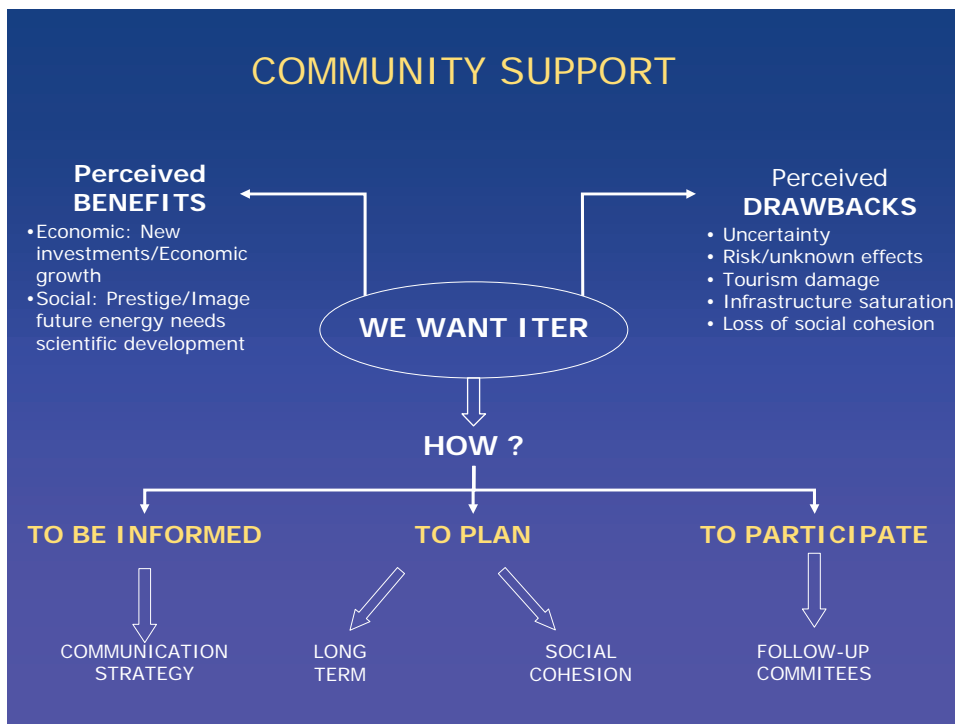
Do you think that ITER will bring some drawbacks? Drawbacks associated to Vandellós ITER site candidature



An imprecise **knowledge about the TER** project was very general in the site and its influence area at that moment of our first contact. There is a high interest on receiving more information from different sources, and contrast the information for themselves. A variety of sources of information are highlighted, including government representatives, the project promoter and not institutional sources. Citizens are willing to listen to independent scientists, authorities, involved and not involved experts, and citizen associations. People want to be informed by an independent source that can offer reliability and trust. It is important to underline that the source of information must be independent from the energy sector.

Our sample also expressed a **strong interest on being involved in future decision-making processes related to ITER**. Strong involvement forms such as follow-up committees and discussion meetings were adhered by 2 in 3 of those who wanted to participate. Some lower effort participation forms were spontaneously mentioned such as referendum (8%) and surveys (7%).

That way, the positioning is clear **WE WANT ITER** but, **How do we want it?** With information, planning and participation. Thus, benefits could be maximized, and drawbacks minimized in order to achieve the suitable integration of ITER in its social environment.



If the candidature of Vandellós progresses, a communication program specifically addressed to the residents in the area should be designed, according to the information needs expressed by them. If the ITER is eventually installed in this area, a careful planning should be carried out, in order to ensure that the whole process would preserve the peculiar social structures of the municipality. When international scientists will be living in the area, their social integration should be promoted. Finally, the future of the area should be planned on long-term bases.

Those are the main ideas to be underlined regarding the community profile and the community support (*Riba et al, 2002*)

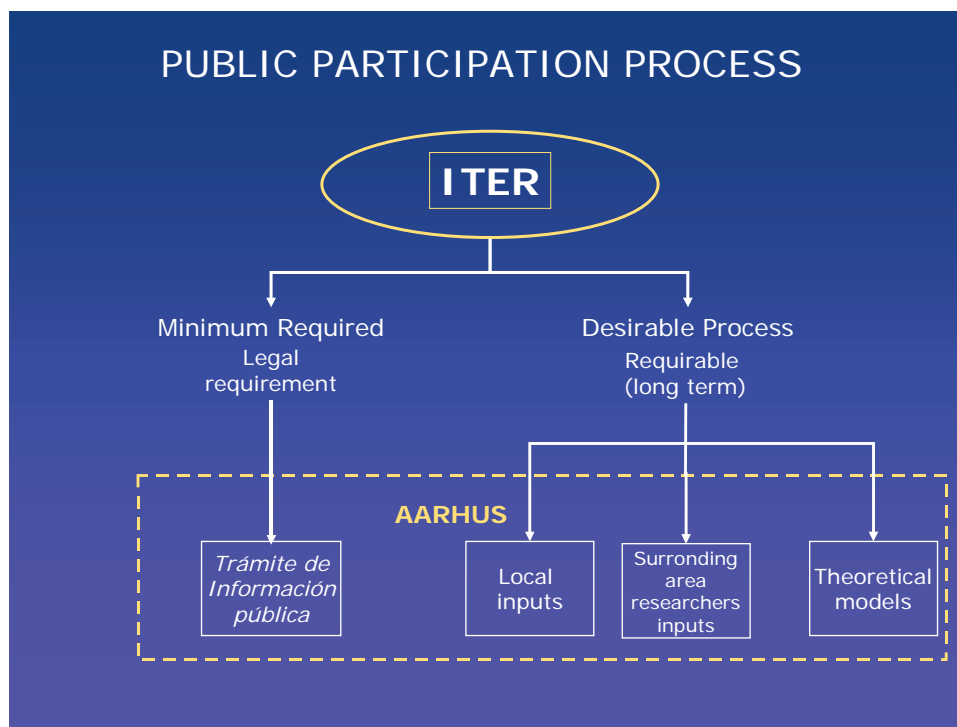
2. PUBLIC PARTICIPATION PROCESS (Stages 2 & 3)

Going back to the main objectives of our research, and with this overview of the community support inputs, let's focus on the second objective of our research: the public participation process – the work performed during 2003.

When we talk about public participation in the case of ITER, we have to consider two different issues:

The Minimum required by our Legislation, the legal requirement, which in our country is the so-called “Trámite de Información Pública”.

According to the Spanish legislation, this “trámite” is much more a bureaucratic procedure, an administrative step in the licensing process, than a real public participation exercise. It is quite evident that such a procedure will never satisfy the local demands in terms of public participation.



Therefore, we focus our research in the identification and definition of the **Desirable Public Participation Process** This desirable process should be based on:

- The local preferences and concerns
- The capabilities of the researches from the surrounding area
- The theoretical models currently in use in the field of public participation
- The international requirements in terms of public participation that are clearly defined in the Aarhus convention

Let see the main results of each of this tasks, the ones performed along 2003.

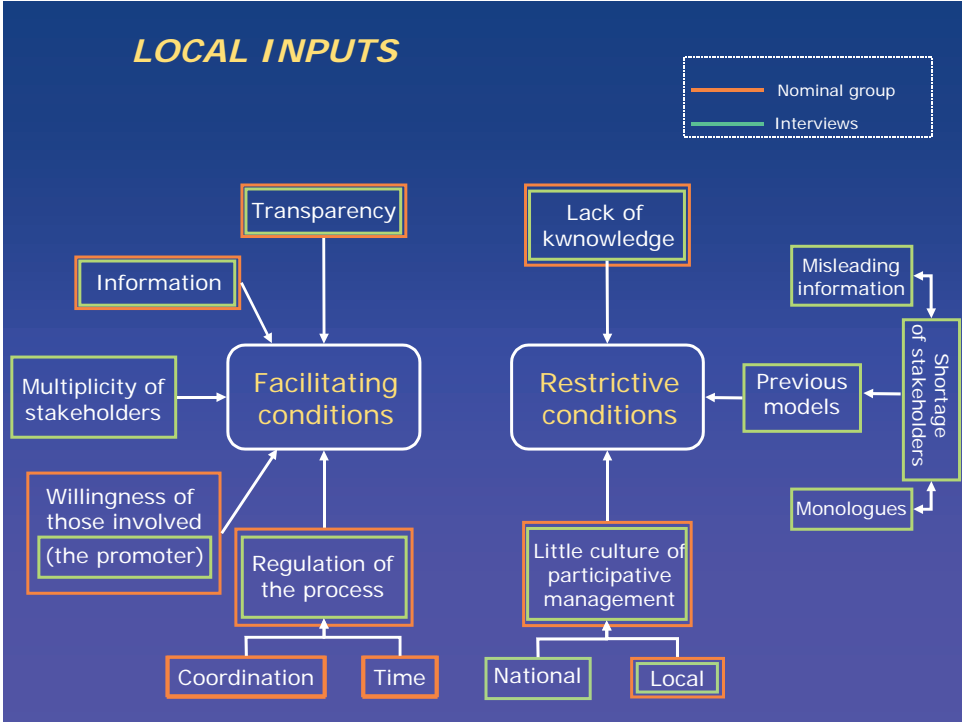
2.1. Public Participation Process: LOCAL INPUTS (Stage 2)

During Stage 2 (January–April 2003) the research focused on the identification of the locals' concerns and preferences in terms of participation: What aims should the process achieve? Who should take part in the process? When should the process start? And so on. The methods applied were individual interviews and one nominal group (Solá *et al*, 2003). The most significant “local inputs” regarding the public participation process are summarized below.

2.1.1. Conditions That Facilitate/ Impede Participation

The history of the area as the site selected for various energy facilities during the 1970s informs the perceptions of local inhabitants as regards any new installation. Attention has been paid to the memories of the local population from the perspective that such elements live on in the memory and are important in so far as they make it possible to imagine future scenarios and alternatives for action. We do not think of memories as something past, superseded, but on the contrary, more as an indicator of specific issues experienced, of concerns and interests relating to both the present and the future.

In this context, “restrictive conditions” were directly linked to difficulties identified as a result of previous models for the establishment of technology in the region. One should simply bear in mind here that the nuclear power plants were installed in the area before the arrival of democracy in Spain, at a time when the decision-making model was clearly, at best, a strictly “Instrumental Model” (Joss, 1998). The “forms” and “methods” associated with such memories awaken a certain scepticism in the face of the possibility of implementing a “Participatory Model”, in spite of the fact that all the subjects interviewed broadly recognise the changes that have taken place in both the social and the institutional context (De Marchi, 2000).

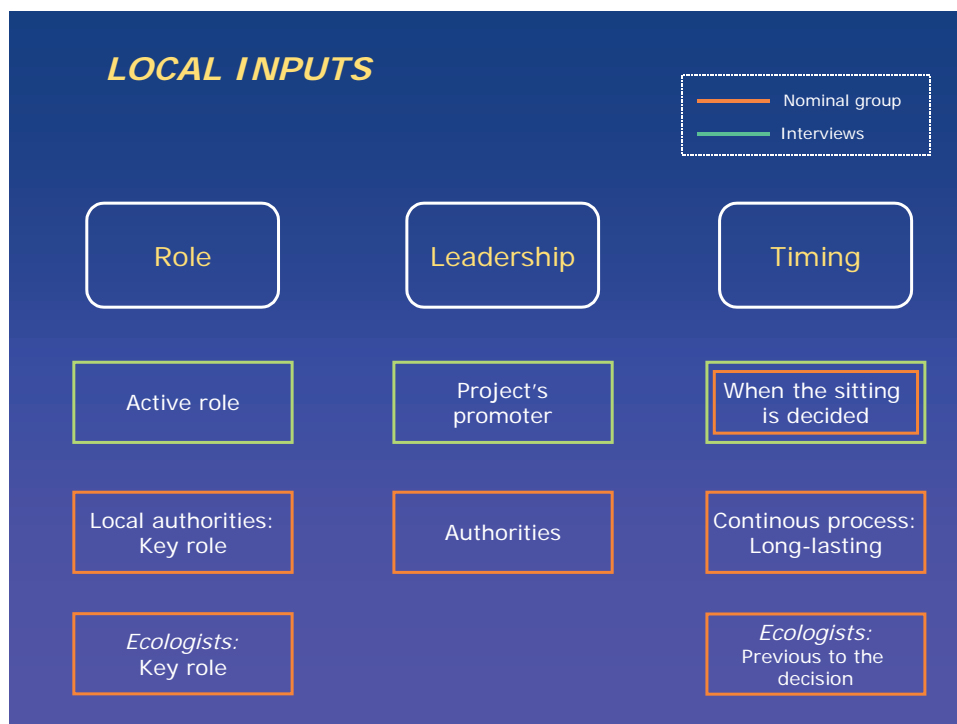


Subjects spontaneously identified also the conditions, which, from their point of view, could facilitate or permit a process of involvement associated with technological installations. The conditions that were most mentioned were transparency, access to information, the willingness of the project's promoter, regulation of the process, and the multiplicity of agents to be involved in the participatory process.

2.1.2. Role, leadership, and timing

This section first includes the results obtained when analysing the role that the subjects, or rather the institutions that they represent, feel they should play in a public involvement process relating to the ITER project. The replies obtained are very diverse, as one might have expected given the broad variety of interests and institutions included in our sample.

The first point to be emphasised is that the great majority of the subjects interviewed believe that their institutions must play an active part in this involvement process. In this context we can underline the consensus that exists regarding the role of the local authorities, considered by everyone to be a key player, even though they may not be the party that should lead the participatory process. The ecologist, for their part, seek an active role in the participatory process.



Having identified the role that the various participants would like to perform in the process, locals were asked to assess **whom, or which institution, should lead the participatory process** relating to the ITER project. Consensus in this regard was overwhelming along the interviews: the institution that should lead this process was the project's promoter. However, in the Nominal Group, this responsibility was apportioned to the "authorities" in the broadest sense.

As regards **the time** at which it is considered that the public involvement process should begin in respect of the ITER project, we once again find that there is complete consensus between the different parties interviewed. Practically all of them assert that the participatory process should begin at the time at which a decision is taken regarding the siting of ITER, neither before nor after.

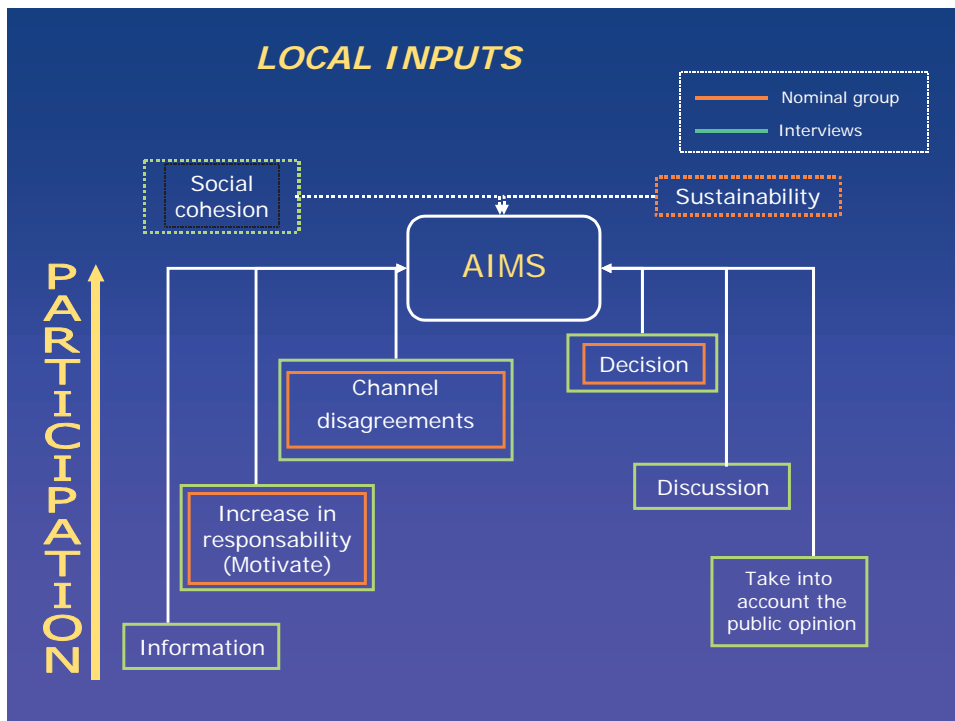
It could be said that the **need for time** was agreed by consensus by the group. This refers to a long and continuous process, since involvement would also seem to appear as a factor that continues on from the short-, medium- and long-term effects of implementation: changes in the economic situation, the environment, etc.

2.1.3. Aims of the Public Participation Process

As the Figure shows, there are two very different dimensions within the “aims”

At the very top of the Graphic we find the final goals of the participation process. Those are the objectives that the locals demand in the long term whatever the degree of real public participation is finally achieved.

Those final goals – social cohesion and sustainability- perfectly reflect the community profile inputs we have already mentioned. In the locals’ own words: *“what we are looking for is prosperity, not wealth*



On the lower part of the graphic we find that aims directly related to the public participation process itself. This participation process is conceived as a “mean” in order to achieve the real final aims (social cohesion and sustainability).

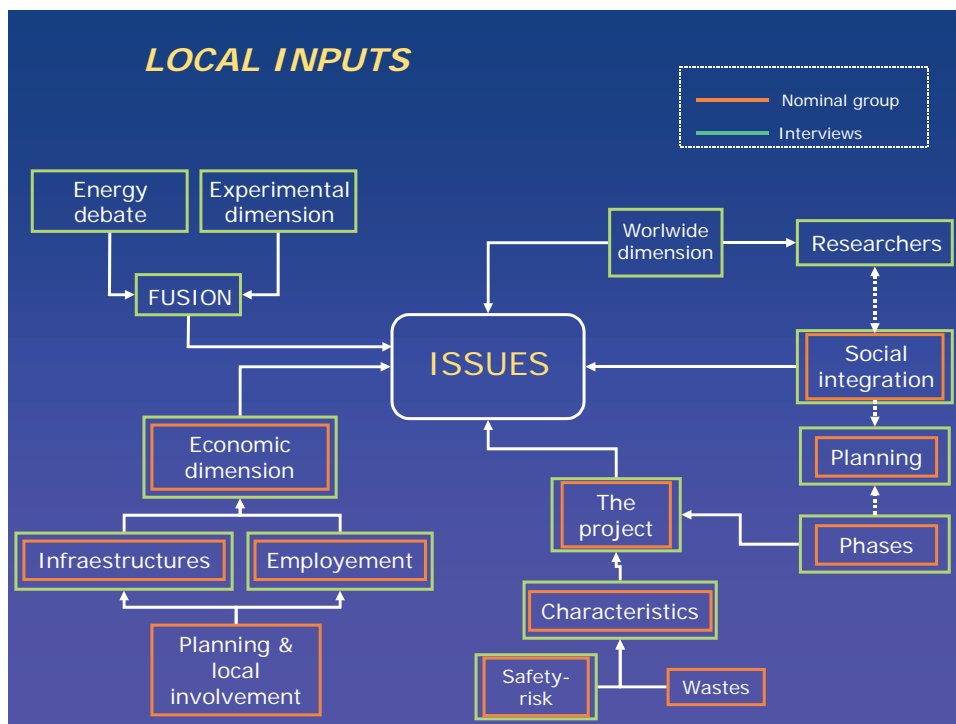
It is important to underline that the “aims” mentioned by the locals within the process itself cover almost all of the steps considered in the so-called model of the public participation ladder. The public participation ladder is one of the models currently in use in the field of public participation (NEA, 2002). In accordance with this model, the degree of public participation passes through different phases as we ascend the ladder – from mere access to information, consultation and participation up to direct decision-making.

The interactive and dynamic character of this process (not only in the theoretical model but also in the local view) should be highlighted: the starting point is information, from which the public opinion could be developed, and taken into account. The locals really emphasized the need to be motivated – i.e. they claim for a stimulating process. The next step would be the discussion, channel of disagreements, up to the real influence in the decision-making process.

Please note that these are the pillars of the future public participation process, and thus some of the issues that should be the object of further research.

2.1.4. Issues that should be dealt with along the Public Participation Process

At first sight we can clearly see the wide scope of issues mentioned by the locals, which clearly reflect the wide scope of the ITER project itself. In other words, people are very aware of the repercussion of ITER at very different levels.



From the methodological point of view, it is interesting to note how individual interviews (results in green) allow higher levels of abstraction than the nominal group (results in red).

In the upper part of the graphic are included issues such as the crucial role of ITER in the future energy scenario (the energy debate and the experimental dimension of the project); and the worldwide dimension of the project, which is directly linked to the arrival of international researchers and the need to promote their integration with the local community

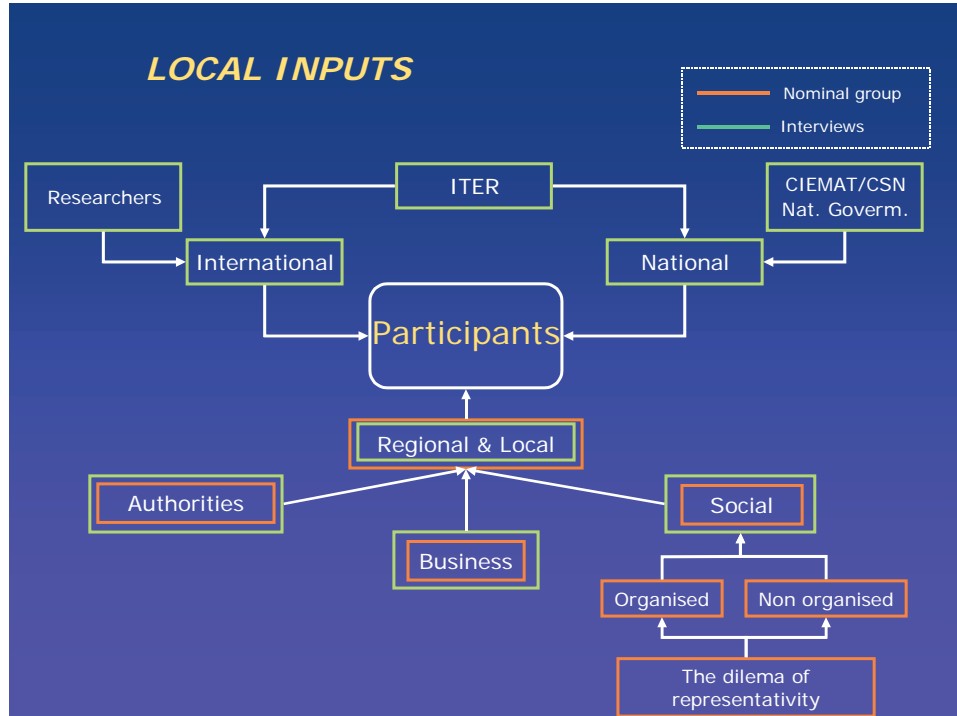
Next, we find Social Integration, appearing as a key issue that will require an appropriate planning along the different phases of the project; and the characteristics of the project, including the Safety/ Risks dimensions. It is interesting to note how the social issues are linked to the risk issues (Social construction of risks)

On the left, we find all the economic issues, including infrastructures, employment and so on. Again we find the need of an appropriate planning and local involvement.

2.1.5. Actors that should take part in the Public Participation Process

It should first be pointed out that the locals identified a very broad range of potential participants, which closely reflects how broad the ITER project itself is.

From the methodological perspective, once again the individual interviews (in green) allow higher levels of abstraction, while the group discussions (in red) allow debates on more specific and everyday-life issues.

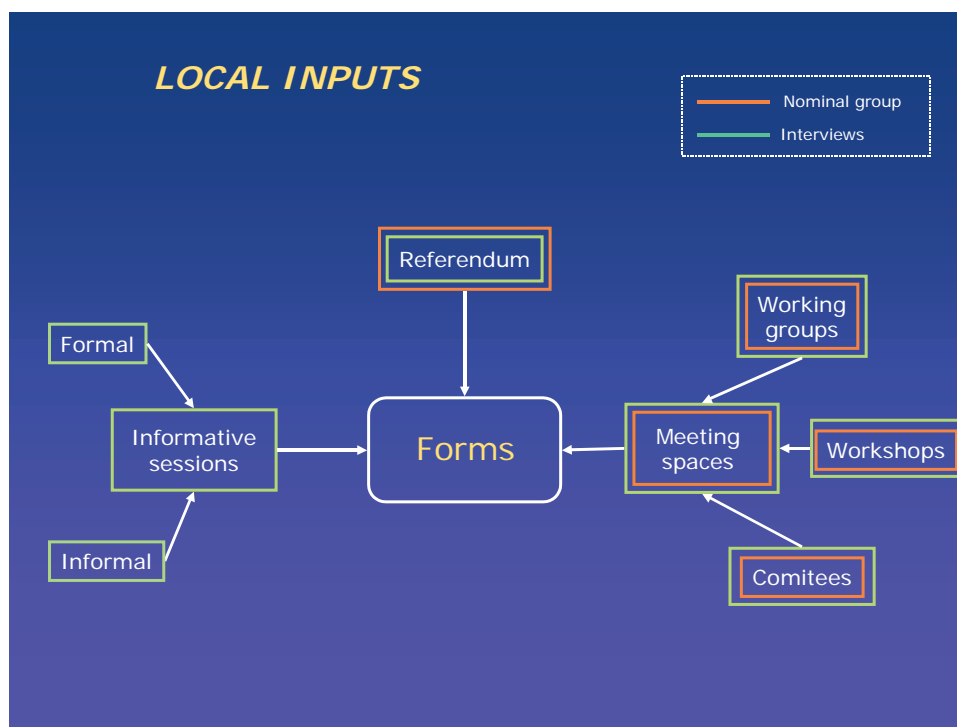


International and national actors can be seen in the upper part of the graphic, while on the lower part the regional and local actors are shown. Within the regional and local level, different categories are identified: authorities, economic actors, and social actors.

The debate about the social actors was one of the most interesting ones within the nominal group. There was a clear consensus about the participation of the organised actors. However, difficulties come up when discussing how the general public should participate. Some state that the general population should participate through their political representatives, while others questioned the legitimacy of the representative model. It is important to note that this is not a “local debate” but a key question in the current society. This is another aspect that will, of course, require further research.

2.1.6. Forms that should adopt the Public Participation Process

Let see now the reflections regarding the specific form to be adopted by the public participation process relating to the ITER project. The range of ideas put forward by the different subjects interviewed was very broad, taking in very diverse participatory forms, from informative talks through to referenda. This diversity was, to a certain degree, foreseeable, given that the variety of perceptions regarding the actual concept of involvement had already been identified.



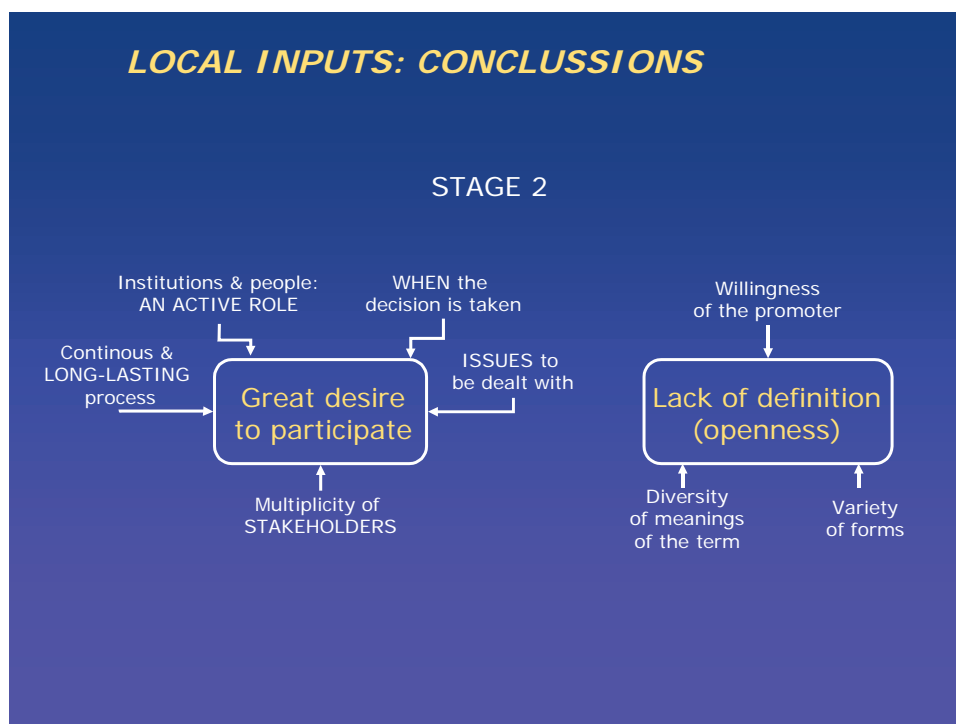
It is worth pointing out that local people systematically returned to the question of the time that should be spent on involvement in all the forms suggested. Proper consideration of the variable amount of “time” was set out as an essential requirement for involvement: it must be sufficient in order to allow ordinary people to take part in the process, but not excessive, since a process that extends over a long period of time could end up disincanting the local population.

2.1.7. Conclusions

Two key ideas were pointed out by our research: the **great desire to participate** –which is really a strong local demand, and the **lack of definition** when it came to putting this process into practice (*Prades et al 2003*)

The great desire to participate:

- People want to play a “**pro-positive**” and active role in any space or spaces that are defined or negotiated as a potential area for public involvement.
- Local people support a “**continuing**” process, not just individual actions. Furthermore, the process must be **extended over time**, parallel to ITER’s “life-cycle”.
- Private individuals and institutions wish to be involved **from the moment that the decision on where ITER is to be sited is taken**
- The identification of **the issues** that should be dealt with during the involvement process was one of the areas in which subjects were able to reach the highest level of definition.
- The process should also include a “**multiplicity of agents**”. The range of actual players identified included the project’s promoter, all the different authorities involved, the business community, local associations and the general public.



Lack of definition / openness when putting this process into practice.

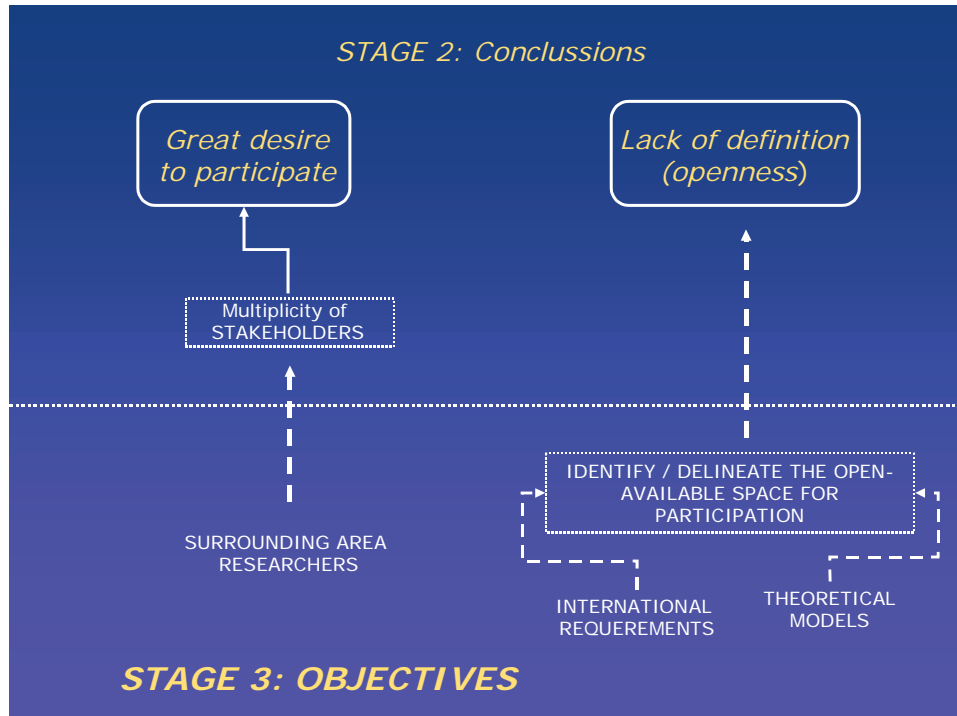
It would seem that there are no specific formulas or clear perceptions regarding the potential process for public involvement around ITER. This “openness” or “lack of definition” is perhaps directly related to the fact that, at present, ITER is only a “possibility”.

However, in our view, this openness should not be understood as “a problem”, but as a positive starting point for a broad range of possible interventions in the future. The questions that should be defined for a desirable public participation process include:

- The willingness of the promoter: Previous experiences confirm that a willingness to listen, exchange information, discuss and “negotiate” makes all the difference. Without this willingness any participatory process ends up being merely procedural. With this willingness the process becomes an enriching dynamic that satisfies all the awoken expectations.
- The diversity of meanings of the term “participation”: Consistent with the research carried out in this area, a broad variety of meanings was identified as being attributed to the term “public involvement or participation”. The range of possibilities is very broad, including aims that extend from the most “evaluative” approaches (involvement as a way of evaluating the state of public opinion) to the most “interventional” (involvement as a method of intervening in the real social situation).
- The variety of forms: This diversity of aims is reflected in detail in the variety of forms of participation mentioned by the subjects as possibilities in the case of ITER. The range of forms mentioned by the different subjects was very broad, from informative talks to referenda.

With these results in mind we defined the objectives of the third stage of our research.

The **final aim of stage 3** (July – November 2003) was to go step forward in the analysis of this desirable public participation process, taking into account not only the local inputs but also inputs from the regional and international level.



A step forward in the analysis of key stakeholders: the surrounding area researchers

A step forward in the identification/definition of this open – available space for participation:

- The international agreements regarding the formal and pragmatical issues of participation – **the Aarhus convention**
- **The theoretical models** currently in use in the field of public participation

Let see the main results of Stage 3 of our research.

2.2. Public Participation Process: RESEARCHERS INPUTS

(Stage 3)

The final aim of this Task was to enlarge the analysis of relevant actors to be involved in the future public participation process: *The Catalan research infrastructure and its positioning towards the reality of hosting ITER in Catalonia. (Muñoz et al 2003)*. In order to achieve this goal, two Phases of interviews were applied.

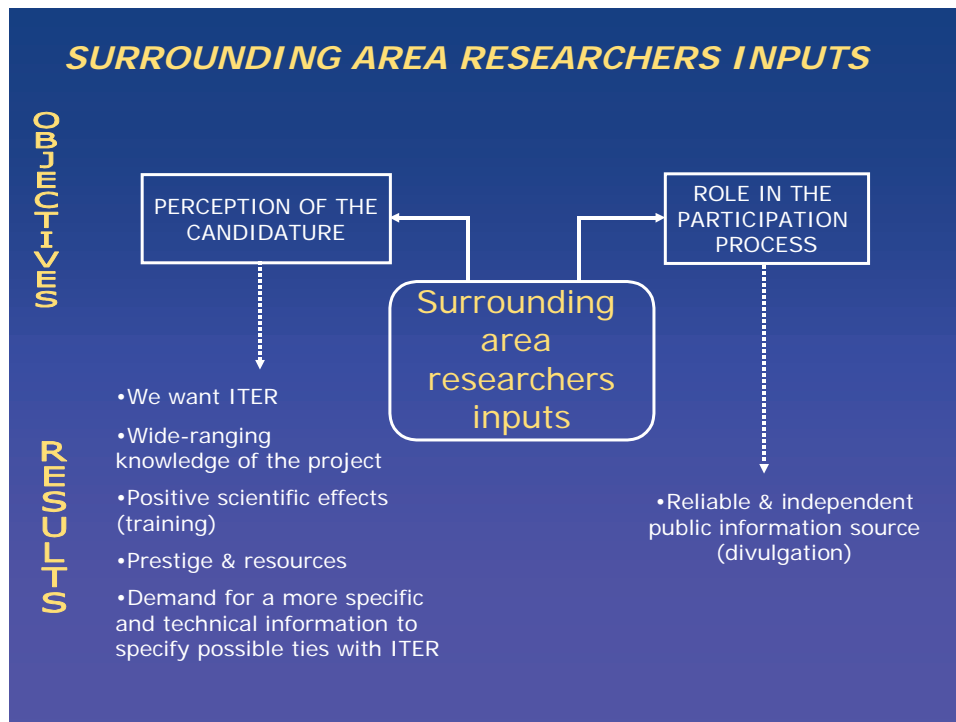
The objective of the First Phase of Interviews, which were held with high-level members of Catalan research institutions (Directors of research centres, Research Vice-rectors), was twofold:

- To identify relevant researchers that could offer their thoughts as to the Spanish candidacy for sitting ITER in Vandellós in the following phase of interviews (snowball sampling)
- To obtain a first general approximation of the institutional opinion as to the possibility of sitting ITER in Vandellós.

In reference to the Second Phase of Interviews, interviews were held with leading Catalan researchers related to the study of energies, new materials and technologies and with social and economic questions related to large facilities. The following questions were analysed:

- Knowledge of the ITER project
- Personal stance in regard to ITER
- The personal & overall scientific relationship of the Catalan scientific community with respect to ITER
- The informative and participative process with regard to ITER.

A total of 15 interviews were conducted, in the case of Phase 1, in the last week of June and first fortnight of July; in the case of Phase 2, during the second fortnight of July. Interviews lasted between 45 minutes and an hour, and were properly recorded, and transcribed. Qualitative data analysis was performed by means of *Atlas/ti*, a computer program of the CAQDAS category (Computer Assisted Data Analysis Software) that allows the management and analysis of big amount of textual, audio, or video data. The analysis was based on the idea of data reduction that is one of the basic principles in qualitative research whatever the theoretical or methodological framework might be (*Pidgeon y Henwood, 1996*)



2.2.1 Attitudes towards the Project

One of the clearest conclusions that can be drawn from the comments by those interviewed is that within the scientific community, the project is evaluated very positively, and the possibility of the Vandellós candidature being confirmed is also seen as positive. These are not "empty" statements, that is, ones that are based solely and exclusively on a desire for a project of these dimensions to be located in Spain, but are rather reasoned attitudes based on the perceived benefits that the project in general (regardless of its final installation) may provide and in particular, depending on whether it is located in Vandellós. The perceived benefits may be grouped in the following categories: economic, employment, infrastructures, technological, energy, environmental and scientific benefits.

Obviously, although the evaluation is predominantly positive, this does not prevent those interviewed from perceiving some disadvantages, something which is logical in a project of this type. These disadvantages can be grouped into two categories, those referring to the project's real possibilities and those referring to its possible negative effects. Among its potential negative effects, are those related to the increase in population in the area and therefore the need for infrastructures and homes, which may have environmental and social effects, because of the change it will cause in the structure of the area. So here we find again this special concern in terms of "prosperity" and "sustainability"

2.2.2 Knowledge about the ITER Project

A significant proportion of those interviewed have a wide-ranging knowledge of the project, at least in terms of its general characteristics. Information was received through varied sources, and because of the characteristics of the people interviewed, the allusions to the information received due to their work as well as information from the

media and government, is significant. In the same way as occurs with any other population type, there are also various types of informal communication.

The scientific community does not criticize this generic level of information and they associate it with the uncertainty of definitively sitting ITER in Vandellós. In the case of the decision being taken to site ITER in Vandellós, the scientific community would like to be informed in a more detailed way. Thus, there is a significant **demand for a more specific and technical type of information** which does not only expand specific knowledge of the project, but also enables evaluation of its possible effects and evaluation of possible personal (or group) involvement in various areas, such as co-operation in the dissemination of information or possible co-operation as a member of the scientific community in the public participation process

2.2.3. Scientific Effects /Repercussions

As was to be expected, in general terms the **perception of the scientific effects that may be expected are positive**, not only in aspects directly related to the scientific areas to which ITER may be linked, but also the effects may be much further reaching and affect wide-ranging sectors of Spanish universities.

This idea is particularly interesting given that it is in contrast to some opinions expressed in the initial research carried out, in which the fact that the area in which the installation is anticipated to take place has an image of "a dirty area with a pollutant industry" was mentioned.

Another type of scientific effect is related to the **relationship that may be established between the scientific community and ITER**. The possibility of co-operation is initially evaluated positively and even seen as necessary, given that its scientific impact is anticipated to be significant. Obviously, the opportunities for co-operation may be determined by the scientific area in which the person interviewed works. In this regard, "Social scientists" pointed out that ITER would open wider research spaces than those obvious at first sight.

We feel that the comments from those interviewed which refer to **the effects on training** that the ITER installation may have in Vandellós are especially interesting. Indeed, if there is any type of doubt with regard to other opportunities for direct participation in the project, a door that seems to be open and which seems particularly attractive to some of those interviewed is the possibility of improving educational opportunities (especially in the third cycle).

2.2.4 Public Information

Scientists feel that the most extensive information possible should be provided to the general population, something which has not been done sufficiently from the point of view of some of those interviewed. However, this may be due to the lack of certainty regarding the final location of ITER.

2.2.5. Role of the Scientific Community: Dissemination

Given the importance placed on information about the project, it is not surprising that those interviewed showed their willingness to co-operate in the dissemination of information. Although some of them obviously suggest that sources with a greater and specific knowledge of the subject should be responsible for dissemination (which is not the case with all those interviewed), it is also clear that the university as an institution can provide the population with guarantees of trustworthiness and independence.

As far as the specific way in which co-operation could take place is concerned, ideas range from articles in the press to contributions to local television, to more participatory ways such as debates with other sectors of the population. It should be mentioned that those interviewed are in general not only in favour of and willing to co-operate in the dissemination of information, but also refer to various experiences in dissemination in which they have been able to participate and which from their point of view could be applied with mild variations in this case.

2.2.6. Public Participation

Opinion in terms of public participation is clearly positive, as in modern society, it is difficult to consider a situation in which those directly involved in an initiative are not taken into consideration. Some of those interviewed explicitly mentioned local institutions, giving the impression that these are considered when the possibility of some type of involvement in decision-making is considered. However, for participation to be really possible and truly effective, it is essential that the population has comprehensive and high-quality information.

Another of the subjects that arises in terms of public participation is the limits that this participation should have, i.e. although it is seen as positive and necessary, it is suggested in some cases that its limits or extent be regulated, and how far the influence of the general population should be considered in a project of this type is also considered. It is therefore suggested, for example, that the final decisions should be taken considering a more global perspective than that which may be held by the people or institutions that are most directly affected.

We feel that comments drawing attention to sincerity concerning the extent of participation are particularly important. That is, concern is expressed regarding the fact that on occasions, it may be offered without a real desire for the people involved to have a capacity for action, and therefore as a simple gesture to satisfy the demands of the population. Obviously, actions of this type may have negative effects, both in reactions to the initiative in the specific case (ITER in this case), as well as in possible subsequent initiatives, as it may lead to disappointment among the population when it perceives itself to be manipulated.

Finally, the participants' opinions as regards the specific participation by the scientific community, were once again positive, although they are sometimes qualified by pointing out that in a participative process, no differentiation should be made between social classes.

2.3. Public Participation Process: AARHUS CONVENTION INPUTS

(Stage 3)

Let's see now the main conclusions of the theoretical study on the Aarhus Convention.

Our study describes the essential contents of the Convention, making reference to each of the three pillars on which it is based: Access to information, the right to participate and, access to justice (*Stec and Casey-Lefkowitz, 2000*). In the last section (*The framework of the convention and public participation in the case of ITER – Vandellós*), the most interesting one, we establish some kind of comparative analysis between the Aarhus requirements in terms of participation, and the inputs we already have about the potential public participation around ITER in Vandellós. (*Prades and Solá, 2003*)

The Aarhus Convention is an international treaty on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. It was signed on June 1998 in the course of the ministerial conference of the United Nations' Economic Commission for Europe.

It is important to highlight the fact that this is the very first time an international agreement has been reached with broad, intense participation by environmental organisations. An alliance of environmental organisations called the European ECO-Forum participated in drafting the document and in all the negotiation sessions organised by the United Nations' Economic Commission for Europe (UN-ECE). The construction of the convention was a participation exercise itself. (*Silina and Martins, 2003*)

The Convention entry into force on October 2002, when the 16country signed it. 45 countries have signed the agreement and twenty-five have ratified, accepted, approved or joined it. It is interesting to note that only six of these are in Western Europe: Belgium (January 2003), Denmark (September 2000), France (July 2002), Italy (January 2001), Norway (May 2003) and Portugal (June 2003).

In the case of Spain the General Courts ratified the agreement in May 2001. However, the government decided to postpone the submission of this instrument for ratification, that is, to put off the formal manifestation of the Spanish state's commitment to Aarhus before the United Nations, until certain legislative changes were made. Thus, the Spanish parliament's ratification is not yet effective.

The Aarhus Convention establishes the need to guarantee the public's participation in three different types of processes:

- Those aimed at deciding whether or not to authorise certain activities with significant environmental effects (Article 6); this is the one we are interested in;
- Those related to the development of plans, programmes and policies on the environment (Article 7);
- And those associated with the preparation of executive regulations and normative instruments (Article 8).

The AARHUS Convention

THE SECOND PILLAR OF AARHUS: THE RIGHT TO PARTICIPATE

Article 6: Authorization of certain activities with significant environmental effects

Article 7: Development of plans, programmes and policies on the environment

Article 8: Preparation of executive regulations and normative instruments

ARTICLE 6:

Activities listed in its Annex I (based on ANNEX 1 of EIA and IPPC Directives) and those that "may have a significant effect on the environment".

- Participating in the early stages "when all options and solutions are still open and effective public participation can take place"
- Receiving adequate information on the activity and the procedure envisaged (time-frames, competent authority or authorities, etc.)
- Having "reasonable time-frames" for participating, enough time for "the public to prepare and participate effectively"
- The results of the participation procedure being taken into account as far as possible by the competent authority
- Being informed about decisions taken by public authorities.

In Community law, an amendment of the EIA and IPPC Directives is currently being negotiated with the aim of adapting the Community legal order to these new international obligations. Requirements for participation as described above will be incorporated¹.

For this Final Report, as an example, we will present the results obtained when analysing one paragraph of article 6, PARAGRAPH 2, the one dealing with the requirements for the PUBLIC NOTIFICATION

"The public concerned shall be informed, either by public notice or individually as appropriate, early in an environmental decision-making procedure, and in an adequate, timely and effective manner".

Paragraph 2 establishes the minimum standards for the public concerned to receive the information it needs to be able to effectively participate in the decision-making process.

Let see the details of Paragraph 2 and what inputs do we have in this regard for the ITER case.

2.3.1 Who must inform the public concerned?

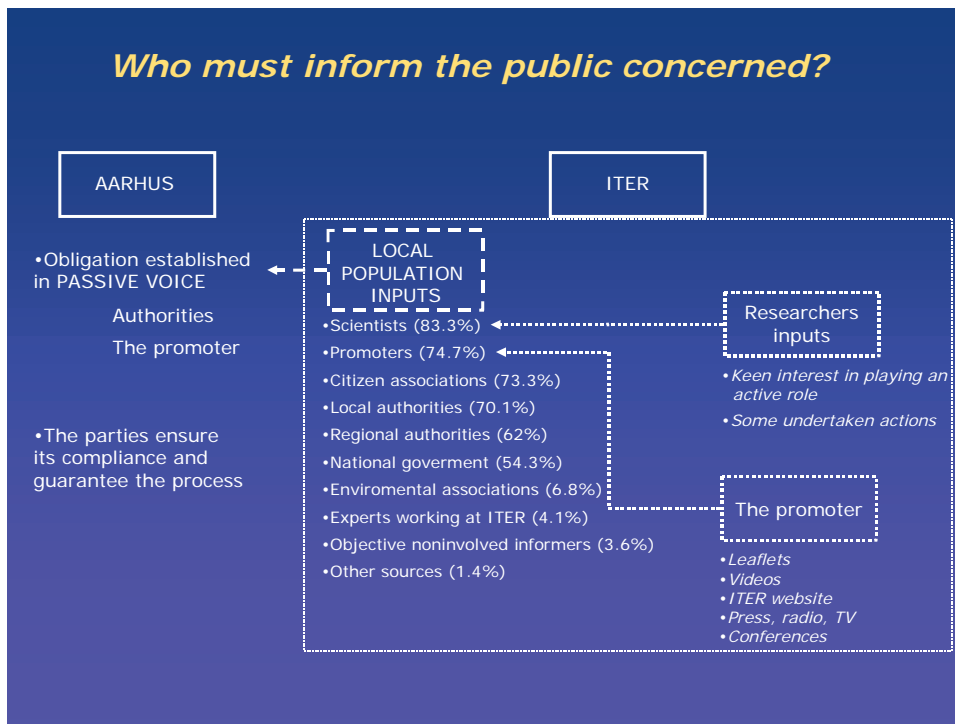
a. What does Aarhus say in this sense?

The obligation to inform is established in the passive voice, thus acknowledging the fact that the Parties must place the obligation to notify this information on different actors.

¹ Proposed Directive on participation in plans and programmes and amendment of Directives EIA and IPPA

According to the AARHUS IMPLEMENTATION GUIDE (official UN document based on the experience already achieved in the Aarhus implementation), it would be most appropriate to place the responsibility for notifying on the authorities themselves, or on the promoter of the project.

The Parties must ensure that the obligation to inform falls on someone or some body and it must act as the guarantor of this process.



b. What inputs do we have for the ITER case in this regard?

- Local Inputs:** According to the studies carried out to date, we know the local population would like to receive information on the project from **scientists, promoters of the project, citizen associations and local authorities**, in this order, with percentages that fluctuate between 83% (preference for scientists), to 70% (preference for local authorities). A minority group expressed more detailed preferences along these lines, explicitly mentioning environmental associations (7%), experts working on the project (4%), and persons with no personal interest in or established commitment to the project. As can be seen, our population spontaneously mentioned the information sources established by Aarhus. But, even more, we know that their most preferred information source is willing to play that role.

- Researchers inputs:** researchers have a keen interest on playing an active role in this sense. In fact, some actions have already been undertaken (Universidad Rovira Virgili – Universidad Polit cnica de Catalu a).

- Promoter Actions:** The promoter has already launched a communication programme aimed at disseminating information on the project. This programme included distributing leaflets, videos, the ITER website in Spain, articles in the press, radio and TV interviews, public forums and conferences on a local, regional and national level, and so forth.

We can thus conclude that in the case of ITER-VANDELLOS, the agents that Aarhus – and the local community – suggests for accomplishing the participation process have a decided willingness to take on the responsibility of being sources of information

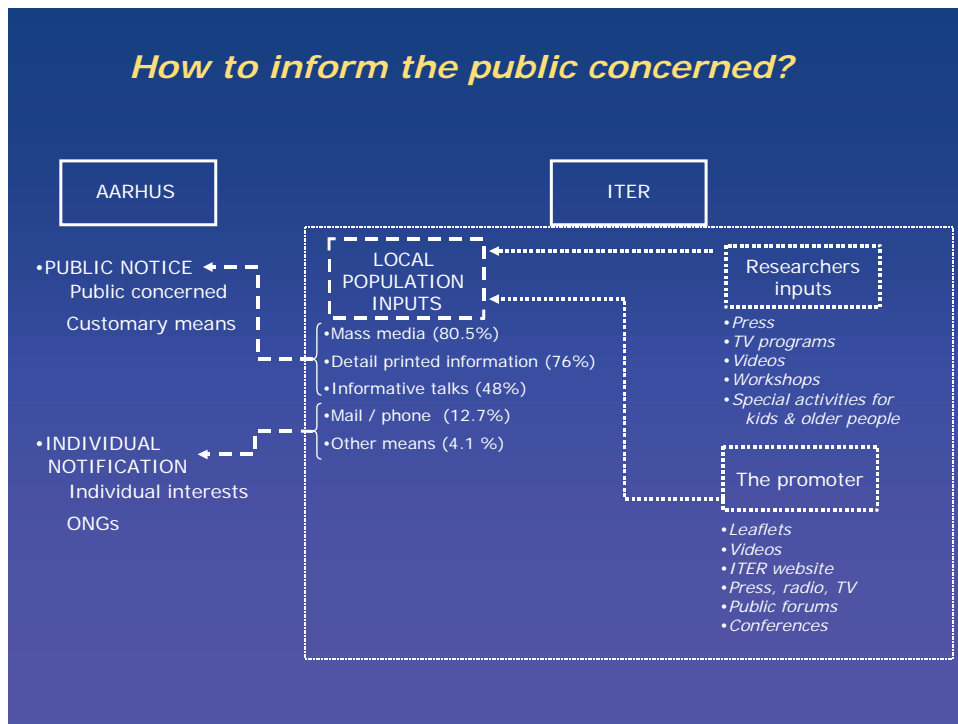
2.3.2 How to inform the public concerned?

a. What does Aarhus say in this sense?

Article 6 makes reference to two methods for informing the public:

1. **Public notice:** Disseminating the specific information to as many members of the public as possible, making use of the means that are usually – in accordance with customary procedure – used to disseminate information. Public information shall be considered “adequate” – insofar as it reaches at least the public concerned by the decision. The means used to notify include publication in newspapers and other available written media, electronic mass media (TV, radio, Internet), or posters in areas with high traffic.

2. **Individual notification:** when there are individual interests that might be affected by the decision. Individual notification is also relevant if we consider that the “public concerned” might include NGOs whose objectives involve environmental protection.



b. What inputs do we have for the ITER case in this regard?

- Local Input

The local population preferred as means for receiving information on the project are the mass media (80%), followed by specific, detailed printed information (70%). Almost 50% of the sample declared that they would attend informational talks on the subject (this percentage reaches 60% for persons between the ages of 36 and 55 with secondary education). Other means spontaneously cited by the interviewees include telephone calls or e-mail messages (13%) and Internet (5%). As can be seen, the

preferences identified by the local population include the means that Aarhus suggests for both public and individual notification

- Researchers Proposals & Promoter Actions:

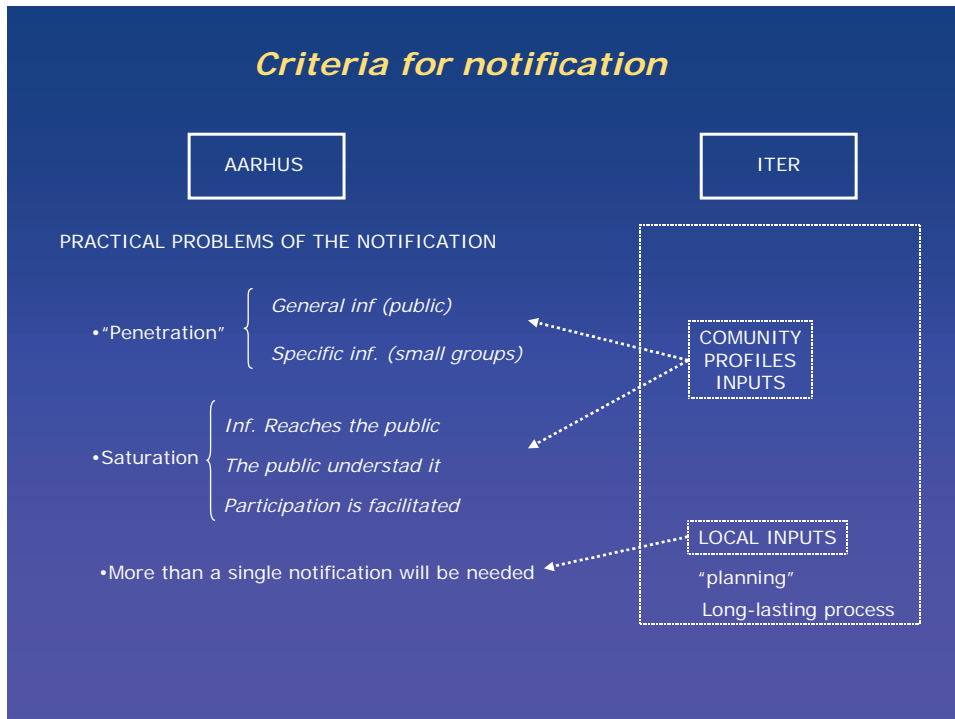
Please bear in mind the willingness expressed by the Catalan research community along these lines. In order to take on this active role in the potential informational process on ITER, they suggest using means that they customarily use when disseminating their scientific activities: articles in the press, participation in informative TV programmes, videos, informational workshops, specific activities for students/professors/senior citizens, etc. Finally, we must take into account the means already used along these lines by the promoter: leaflets, videos, the ITER website in Spain, articles in the press, radio and TV interviews, public forums and conferences at the local, regional and national level, and so forth.

2.3.3 Criteria for Notification

a. What does Aarhus say in this sense?

Aarhus draws special attention to the practical problems of notification. Although we are not going into detail on this aspect, we want to show how Aarhus takes into account the “real problems” of public notification, and the kind of suggestions its implementation guidelines include.

* A key concept in this context is “penetration”, which can be understood as the use of a series of tools in order to establish a hierarchy in the information, with the aim of reaching deeper penetration of general information among the public, combined with much more specific information focused on smaller groups. General information can be much more effective if it makes reference to this other, more specific information.



*Saturation: Aarhus also takes into account the degree of information saturation that characterises contemporary society. It is not always easy to “draw the attention” of the public we wish to reach. Thus, efforts must be made to ensure not only that the information reaches its destination, but also that the meaning of the notification is easily understandable and shows that all reasonable efforts have been made to facilitate participation.

* Effectiveness, adequacy and timeliness can imply the need to carry out more than a single notification at a given time. If it becomes obvious that more than one notification will be needed, subsequent notifications will have to be included.

b. What inputs do we have for the ITER case in this regard?

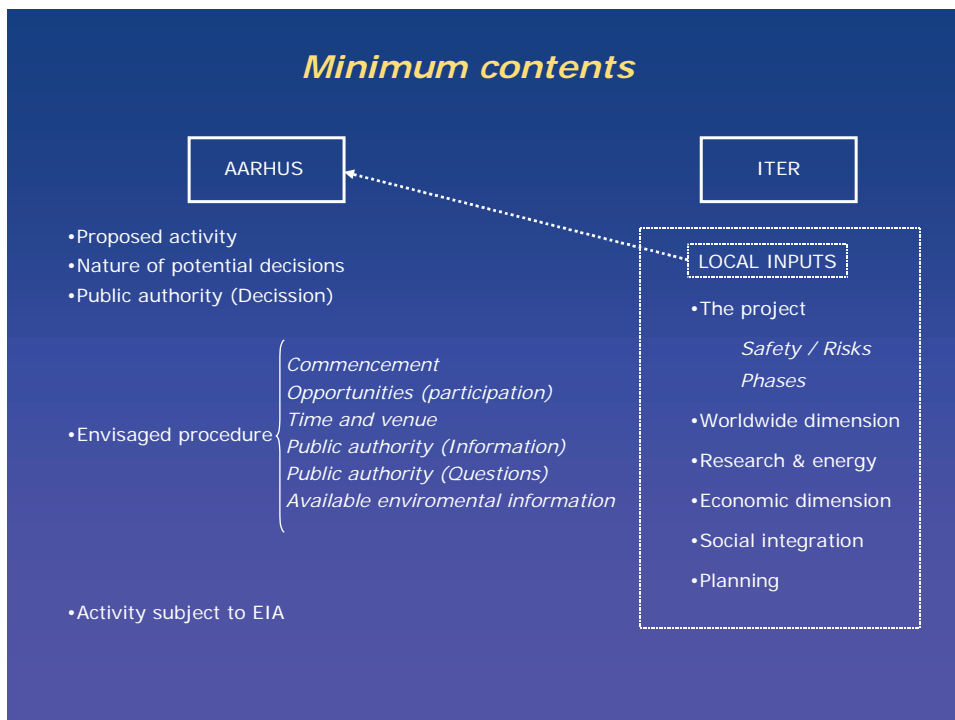
It is quite clear that the COMMUNITY PROFILE INPUTS are essential in order to properly identify the relevant “small groups”, to reach the public, and so on.

In the case of ITER, it will be necessary to carry out more than a single notification, due to the demand expressed by the local population along these lines. “Planning” and long-term consideration have emerged as basic priorities among the “public concerned” in the case of ITER. This concern is very closely linked to previous experiences with large technological facilities in the area and the need to “learn from the past.”

2.3.4. Minimum Contents

a. What does Aarhus say in this sense?

The Convention establishes minimum standards which the information to be made available to the public for examination must meet. It specifies a not necessarily exhaustive list of the information that is relevant for the decision-making process in all possible cases. This list is mainly based on national and international experience in EIAs.



The Minimum Contents established by Aarhus are the ones summarized in the graphic, together with a *non-technical summary*. This summary must be comprehensible by the average citizen. Its purpose is to help the members of the public digest and understand the technical content of the information and ensure that the authorities are helping and guiding the public in an effort to facilitate their participation in decision-making.

b. What inputs do we have for the ITER case in this regard?

In line with the numerous dimensions inherent in the installation of a technological centre with ITER's characteristics, the issues that the interviewees believe should be dealt with in the public participation process cover a broad spectrum. Thus, in the case of ITER, it seems that in order to respond appropriately to the locals' demand, the non-technical summary must go beyond the "not exhaustive" list put forth by Aarhus.

The issues that must be included, one way or another, are the following: the world-wide scope of the project, the experimental nature of the project, the characteristics inherent in the project (security, impact on the environment, waste, etc.), the economic dimensions of the project (repercussions on local levels of employment, infrastructure, economic benefits, etc.), phases of the project: planning for the future (dismantling and "when ITER is over"), the issue of energy, and social cohesion ("integration between those who arrive and those who are already there").

2.3.5. Conclusions

We have just seen some examples of the kind of analysis we have performed within the framework of the Aarhus convention.

The Aarhus Convention defines the framework that shall govern the processes of information and public participation in Europe around large-scale facilities in the near future. Despite the fact that the Convention has not yet been ratified before the United Nations in Spain, this will take place in the foreseeable future. Because of this and the relevance of the Convention itself, our study has suggested an approach to public participation based on the Aarhus principles and postulates.

Throughout this study, relevant input has been included on how to involve the participatory process with regard to ITER. This input is based on both the principles of Aarhus itself and the results obtained from investigations carried out within the framework of the EISS-VANDELLOS studies, both locally and regionally: needs and preferences in terms of information / participation, peculiarities of the area, potentialities and capacities, and so forth.

The description of the principles included in our Report that shall regulate the participatory processes in this type of facility thus constitute the framework within which the potential process of participation around ITER must fit, should VANDELLOS ultimately be chosen as the ITER site.

2.4. Public Participation Process: THEORETICAL MODELS INPUTS

(Stage 3)

Our last theoretical study tries to offer additional inputs for the definition of the potential public participation process to be established around ITER in case it finally comes to Vandellós. For this Final Report we will highlight the more pragmatical issues of the literature review on public participation models:

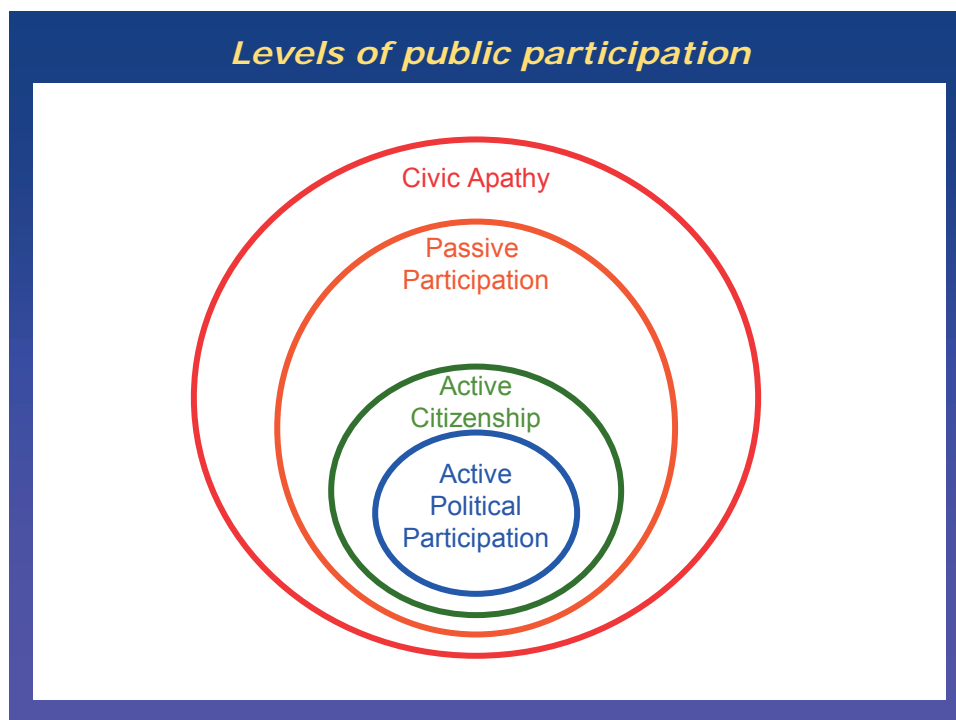
- Levels and Quality of Public Participation
- Conditioning factors
- Requirements
- Empowerment

The aim is to recognize the kind of public participation model Aarhus imply, highlighting key issues involved in successful public participation. These issues should, of course, be considered and incorporated in the final design of the public participation process around ITER in Vandellós. (Blanch, 2003)

Participation represents a way of operating within a democratic system, in which several tiers (the authorities, management, ordinary people, civil society, etc.) actively collaborate in order to improve public participation in political life. It is the substance and positive face of democracy, i.e. control by the people over the issues that concern them. By contrast, the social representation of a lack of participation is usually steeped in negative connotations. The counterpart to democracy is represented by *alienation*, i.e. political *powerlessness* and *helplessness*.

2.4.1. Levels and quality

Participation cannot be defined in terms of *all* or *nothing*, but should instead be seen as a continuous process throughout which there are greater or lesser degrees of involvement, commitment and dedication.



The previous Figure illustrates the different levels of public participation, while the following Table summarises the characteristics of *high-* and *low-quality* forms of participation.

Quality of public participation		
	Low	High
Role of the authorities and management	Ordinary citizens are informed, notified, advised and alerted by the competent authorities in relation to a plan of action that affects them, and they are invited to react positively to it, giving their consent to the action to be taken.	Ordinary citizens are invited to become actively involved in an organised and systematic way in decisions relating to the agreement of a plan of action that interests and affects them, participating in the definition of its objectives and the design of the strategy required to achieve these objectives
	The public authorities, using a basically asymmetrical and vertical top→down relationship model, make speeches to ordinary citizens seeking to persuade and pacify them as regards the benefits of the plan of action that the authorities are describing and imposing.	The public authorities, using a basically symmetrical and vertical bottom→up relationship model, enter into dialogue with ordinary citizens, seeking consensus through negotiation in respect of the plan of action to be implemented.
	Based on their monopoly over power and knowledge, the public authorities provide ordinary citizens with the resources necessary to understand the changes planned and to adapt to them.	Sharing and delegating both power and knowledge to a certain degree, the public authorities make ordinary citizens jointly responsible for the programming and management of the changes planned and any strategies used to deal with them.
Role of the ordinary citizen	Civic apathy among citizens and groups that function on the margins of any process involving public participation in civil life, conventional or otherwise.	Active political involvement by political, social or union leaders, who participate actively in decisions relating to objectives and strategies.
	Passive participation from citizens who only become active when they are specifically required to do so.	Active civil involvement by agents who participate actively in conventional civic and political life (meetings, debates, etc.) and non-conventional civic and political life (demonstrations, strikes, etc.).

It is quite evident that the Aarhus Convention represents an effort on the way for a high quality public participation process.

2.4.2 Conditioning factors

Civic participation is not the automatic result of some form of invitation to participate, but is instead a process that is influenced by a series of circumstances. Initially, research into the elements that facilitate or inhibit civic-political participation was concentrated exclusively on studying factors that affected the initial decision to participate or not to participate, along with the demographic variables that would hypothetically condition this decision (gender and age). This approach gave very few results, and so factors relating to maintenance of participation have gradually been taken more and more into account, while at the same time shifting attention towards the role played by other types of conditioning variables, such as the ones included in the following table, with special emphasis on psycho-social variables.

Variables that have an effect on Public Participation
<i>Quantity and quality of the information</i> available in this regard
<i>Previous experience of successes / failures in civic participation processes</i> (individual, group, organisation, community) and subsequent cost/benefit ratio, along with the relationship between the expectations generated and the actual results achieved
<i>Social tradition of a participative culture</i> (social movements, associations, NGOs, third sector, civilian society, etc.)
<i>Living conditions</i> among the local population
Space, time and material resources available for participation
<i>Ideological environment and dominant values</i> in respect of rights and duties, the morality and usefulness of participation, the importance of the results expected from actual participation, etc.
<i>Legal and political framework</i> that conditions, directs and either facilitates or impedes participation
<i>Factors in the institutional arena</i> that either facilitate or impede the participative process
<i>Social climate for democratic participation</i> in the immediate participative environment (leadership, communication and decision-making models, mutual social-support networks, atmosphere of empathy, cordiality, etc)
<i>Control locus:</i> The internal attribution of the causes of a problem (it's our fault) combined with the external attribution of a solution (the means of solving the problem are not in our hands) is associated with a sense of defencelessness and a subsequent low level of participation. The external attribution of the causes of a problem (it's the system's fault) combined with the internal attribution of a solution (the means of solving the problem are in our hands) is associated with a high sense of political responsibility and a positive motivation to participate.
<i>Expectation of effectiveness.</i> The more convinced people are that they are able to participate in civic-political life and that their participation will bring them positive results in areas that interest them, the greater will be their willingness to participate and their actual commitment to do so.
<i>Social capital and sense of community</i> (perceived ability to lead a socially active life in community groups and environments that facilitate social interaction which is psychologically satisfying and emotionally gratifying).
<i>Credibility and trustworthiness</i> of the civic-political institutions involved, as seen through the eyes of the ordinary people.

Our research has allowed us to identify and analyse some of this variables having an effect on public participation, such as *Quantity and quality of the information available in this regard, Previous experience of successes / failures in civic participation processes*, and so on. However, if the public participation process around ITER finally takes place, further research should be undertaken in order to properly identify and analyse some of the remaining variables.

2.4.3 Requirements

There are no master formulas that can be universally applied as regards forms of developing civic participation. There are only generic models, which may be implemented, depending on the individual characteristics of each specific case.

In order to be workable, civic participation requires certain conditions that affect both the public authorities and the ordinary people involved:

- **The public authorities** are required from the outset to show political will and a particular attitude, such as a readiness to enter into dialogue, a sense of shared responsibility, a commitment to negotiation, etc., in addition to facilitating the proper structure that will offer the people the opportunity and resources to ensure that their participation is accessible and effective.
- **The people** must display the same attitudes, as well as sufficient levels of information, motivation and aspiration, along with expectations of control and effectiveness.

Although further and more specific investigation should be carried out in this regard, results of our research point out the promoter' (Ciemat) willingness to enter into dialogue as well as the local people' sensibility on this issue.

If it is to be relevant and significant, public participation must play an active role when defining the general objectives and strategies. However, certain **phases in the process** for the management and implementation of an established plan are not compatible with participation, due to their complex or technically specialised nature. This could probably be the situation for some ITER phases.

Phases of Public Participation
Outlining of the area – problem
Definition of general objectives
Consensual preparation of a plan of action
Management of programmed actions
Evaluation of the process and its impact

The participative management of public issues offers unquestionable long-term **advantages**, though it brings some disadvantages in the short term as regards the costs involved in terms of time and energy and the problems of inefficiency and psychological wear and tear resulting from the long debates that precede any decision.

By contrast, the technocratic management of processes led in a *top* → *down* way by “expert” personnel allows one to deal with “emergency” situations with a greater guarantee of *success*, without the threat of delays in facing up to “solutions” and without the risk of having to surrender the advantage to members of collectives who are defending highly individual ideological positions or economic interests (and who are sometimes openly anti-social or opposed to the interests of the general population) and who could weigh down any attempt at consensus during the collective debating process.

However, management without participation results in notable dysfunctions, such as the demotivation of the general population (due to its helplessness, frustration, etc.), avoidable errors when decisions are made, rigidity in the bureau/technocratic system, potential sources of basic resistance and conflict, the absence of the synergies that result from participation, a lack of credibility and trust in the system, etc.

The **design of any civic participation process** must respond to a series of topical questions relating to social planning, such as those included in the following table:

Planning Public Participation
In what (area of activity)
Who (leading players)
Why (basic reasons for the process)
With what purpose (general and specific objectives)
To what extent (range and depth)
How (methodological strategy)
With what (material, technical and human resources)
Where (location)
When (period of time)

These topical questions are, of course, crucial for the potential public participation process around ITER. As we have just seen, “planning” is essential at the local level.

2.4.4. Empowerment

When organisational theorists talk about *Empowerment*, they are referring to the strategic adoption of decentralised management through the transfer of *power* from the top downwards and from the centre outwards. This process is intended to offer positive effects as a result of greater levels of participation from the people involved in making organisational decisions.

For their part, community-based theories underline the dual aspect of *empowered* involvement:

- **Environmental (objective)**, through the creation of structural opportunities and resources that allow access by the community to the instruments of power.
- **Personal (subjective)**, through the adaptation of the perceptions, attitudes, aspirations, expectations and intentions of individual people, groups and communities to the idea that positive change is possible if they contribute their own commitment in a way that is sufficient to make the process viable.

A community model for the application of *empowerment* in order to encourage public participation is summarized below:

Empowerment of Public Participation	
Concept	Process by which the subject (person, group, organisation, community) acquires control and power over his/her/its environments through public participation.
Premise	Certain individual, group, organisation, community, social and political problems associated with a low level of civic participation are not resolved because the parties affected by them believe that they have neither the knowledge nor the ability to resolve them (helplessness) and/or that they lack the opportunity and appropriate structural means to achieve this (powerlessness).
Objective	Enable people, groups, organisations, communities and societies to have effective control over their living environment through public participation.
Intervention strategies	<p>The preparation of the agents and means required to face up to the challenges of public participation with objective and subjective guarantees of success requires action to be taken on a dual level:</p> <p>Objective</p> <p>a1. Removal of any obstacles (material or social) that impede the perceived ability to control the environment through public participation.</p> <p>a2. Creation of the opportunities and structural means required in order to have effective power through public participation.</p> <p>Subjective</p> <p>b1. Questioning and debunking of (false) beliefs relating to the supposed natural, normal, necessary, inevitable, inescapable, unchangeable, fated nature of a political environment that is uncontrollable by public participation.</p> <p>b2. Generation and reinforcement of expectations of control (belief that it is possible and viable to face up to a difficult situation, thus preventing it, escaping from it or simply overpowering it) and effectiveness through public participation.</p> <p>b.3. Provision to individuals, groups, organisations and communities of the information, knowledge, values, attitudes, aspirations, projects, abilities, skills and other resources required so that they can engage in public participation competently and effectively.</p>

This “intervention strategies” should be taken into account when defining and applying the potential public process to be established around ITER if it finally comes to Vandellòs.

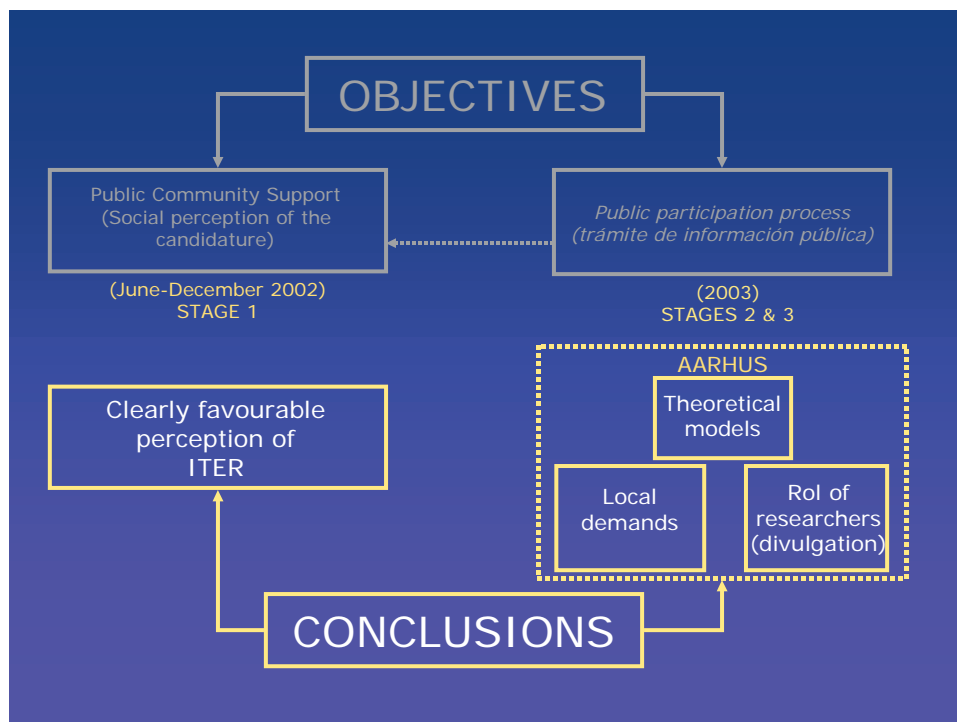
D. CONCLUSIONS

The main conclusions associated to the objectives of our research are the following ones:

- ▣ Regarding the first objective: **PUBLIC COMMUNITY SUPPORT**, we can conclude that there is a clearly favourable perception of ITER, not only at the local level, but also at the researchers level.
- ▣ Regarding the **DESIRABLE PUBLIC PARTICIPATION PROCESS**, we have already identified the local demands, the capabilities of the researchers, the international requirements in this regard, and the implications from the theoretical field.

A key idea we would like to stress is how our local/regional inputs fit into the Aarhus requirements. Furthermore, the theoretical models' inputs could, of course, guide and improve the final design of a successful public participation process around ITER.

We feel this is a significant starting point for the future participation process around ITER in case it finally comes to Vandellós



In summary, the present report provides the fundamental bases for designing and move on the way to a successful public participation process around ITER. This public participation process have to be based on the local peculiarities and capabilities we have just seen, on the requirements established by Aarhus, and on the suggestions derived form the theoretical models on the field.

If the Spanish candidature prevails, based on the results of this report and with some additional specific analyses, the final strategy to be adopted could be consequently designed.

E. A Picture of the Media Coverage of ITER: Content Analysis of the Spanish Press

1. Objective

Although it was not foreseen in the technical specifications of this last stage of the investigation (July - November 2003) the research team decided to carry out an additional task with the intention of completing our knowledge of the reality under investigation.

As mass media messages are widely recognized to have an impact on the reader and on the reader's processing of the information, we decided to carry out a CONTENT ANALYSIS of the written press in order to identify which is the image that the media have been transmitting on ITER and on the Vandellós candidacy in particular. Thus, the OBJECTIVE of this analysis it is to identify the image that the national, regional, local, and economic press has been transmitting about ITER and about the Vandellós candidacy in particular. (Doval et al, 2003)

2. Procedure

A selection of print media were analysed during a period time of eighteen months – from the 1st of April 2002 (when the Spanish candidacy to host ITER was officially notified) until the 30th of September 2003 (when the media analysis started).

The newspapers: The selection of newspapers was based on the press circulation figures. Consequently, the newspapers of greatest diffusion at the national, regional, local, and economic press were the ones selected for our analysis: El País, El Periódico, Diari de Tarragona, and Expansión.

The articles: A newspaper database (www.mynewsonline.com) was consulted in order to identify the number of articles published by the Spanish press along our selected period of time dealing with ITER. The articles in which at least one of the following words “ITER, CANDIDACY, VANDELLÓS, FUSION, REACTOR” appeared in headlines were selected for the analysis. A total of 195 articles containing these key words in headlines were identified, and analysed. (51.32% of the published articles).

Coding Protocol: A coding Protocol was designed in order to cover all major aspects of the information published about ITER: Background information; Main topic; Secondary topics; Background topics; and Tone of the article. (Lombard et al, 2002)

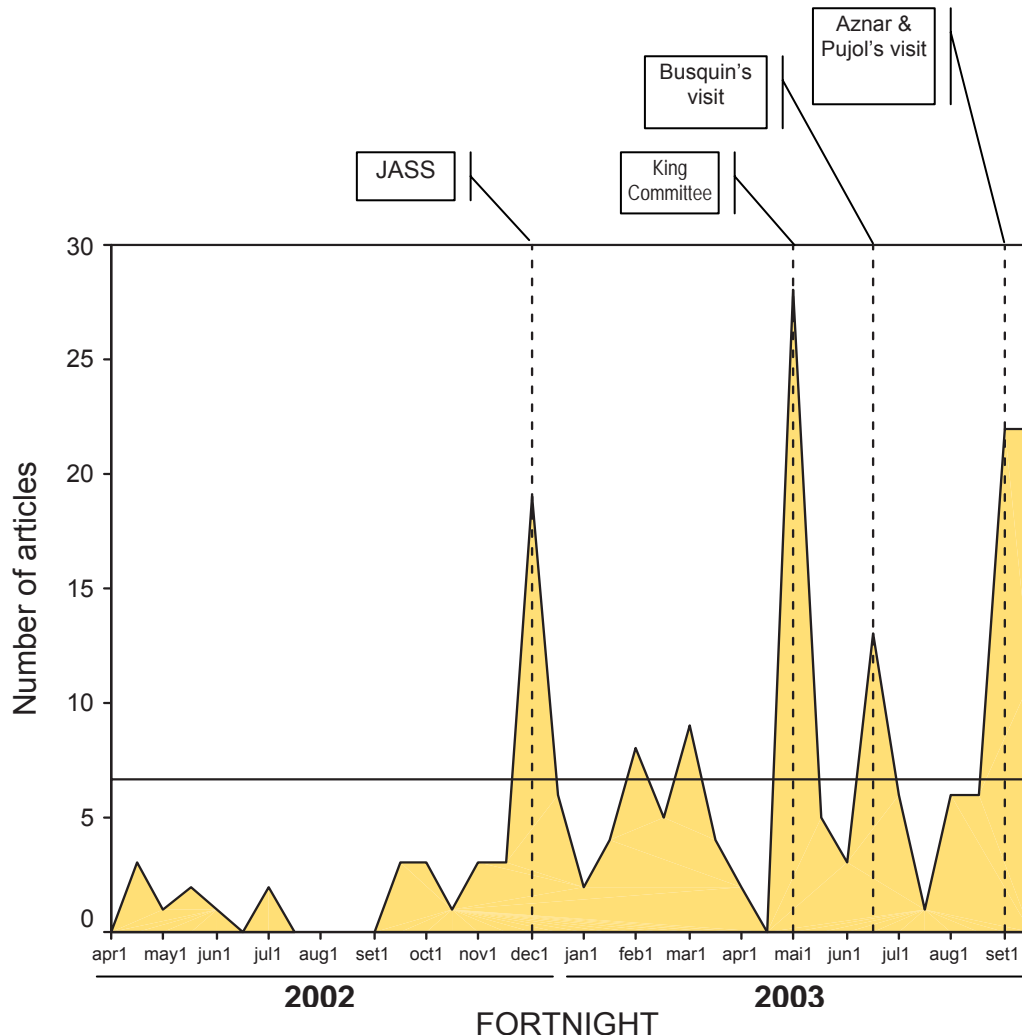
Inter - Coder reliability : Inter- coder reliability was analysed by means of an additional scoring of a random sample of 27 articles published in the selected newspapers. Reliability was evaluated for the “topics”, i.e. grouping both main and secondary topics. Percent agreement, Cohen's kappa, and Krippendorff alpha index were measured. (Popping, 1988). Results ranged from “moderate” to “very good”

Data analysis: The Statistical Package for Social Sciences (SPSS) V.11.5 for windows was used for the data analysis.

For this Final Report we will highlight some of the conclusions of the analysis, showing some specific examples of the results, such as the temporal sequence of the articles, the main and secondary topics, or the tone of the articles.

3. General Results

The number of published articles dealing with ITER substantially increases as times goes by. The more recent dates, the more number of articles are published in the press. In other words, ITER has attracted more and more attention as the moment of the final decision comes closer.



On the average, seven articles were published every fortnight, i.e., everyday out of two an ITER related article was published in any of the newspapers considered in this study. As we have just mentioned, the more recent dates, the more number of articles are published in the press.

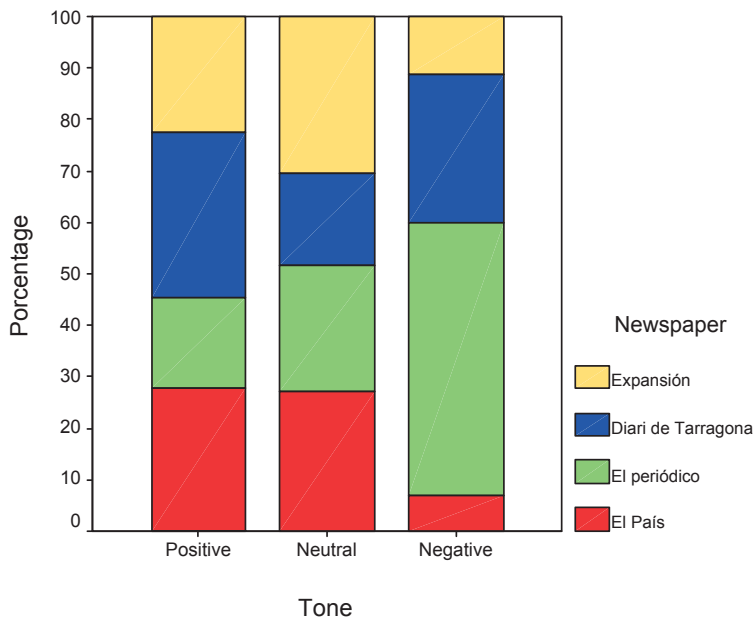
It is worth mentioning how specific events catch the attention of the media. As the Graphic shows, four events have headed the “publishing” about ITER in our country. These are the more prominent ITER events according to the analysed newspapers: the Joint Assessment of Specific Sites (JASS); the Announcement of the King Committee; Busquin’ visit to Vandellós; and the Aznar’ and Pujol’ visit to Vandellós. Almost all of these events are directly link to the Decision-Making Process regarding the ITER site or to the Promotion of the Vandellós Candidacy.

ITER has had a wider impact on the local press. The local press is the one devoting more space, more front pages, and more editorial opinion to the ITER related issues. The more geographical closeness to the ITER proposed site, the more prominence is given to the project

There is a clear prominence of Official/ Governmental information sources when spreading information about the ITER project in our country. Regarding the Civil Society and other institutions sources', we can underline the outstanding role of the ecologists groups.

The Spanish press has been transmitting basically news articles (facts) about ITER. Thus, 41% stories presented a neutral tone, in other words, no position towards ITER became apparent. Those stories merely present straight facts related to ITER events. Focusing on those articles with a clear positioning towards the project and the possibility of hosting it in Vandellós results are definitive: 78.3% of them expressed a positive tone, while 21.7% showed a negative one.

These data clearly match with the results already obtained in earlier EISS-Vandellós studies regarding the social perception of the candidacy. Both the previous qualitative and quantitative results showed clear support from the local community for the ITER candidacy ("We want ITER").



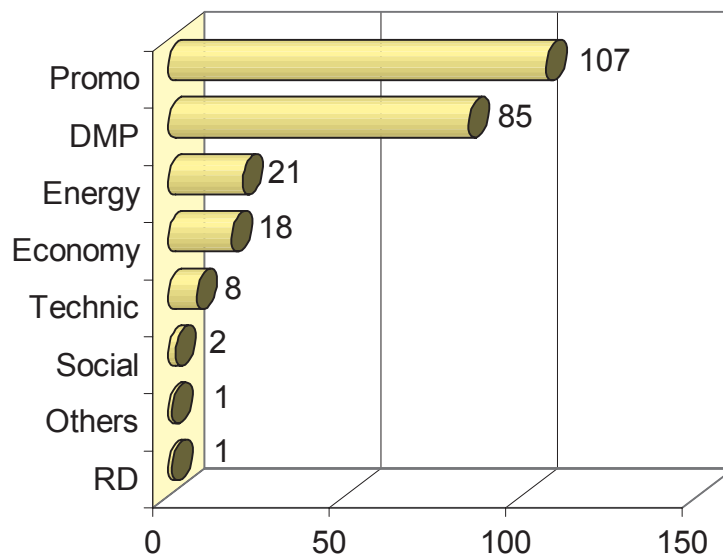
As far as differences among newspapers are concerned, the national press (El País) published mainly positive or neutral tones, while the regional press (El Periódico) showed the more critical views. The local press (El Diari) show a quite balanced tone, and the economic press (Expansión) tone could be defined as a neutral-positive one.

4. Detailed Results:

Seven ITER related topics were considered in our analysis: Economy, Energy, Research and Development, Decision making Process, Promotion of candidacies, Social, and Technical issues.

In each article, the issue given most attention, the focus of the story, was classified as “*main topic*”. The same seven topics could be scored as a “*secondary topic*” whenever the issue emerge in the article and it had not already been scored as the main topic. In most cases the “secondary topic” is the argument on which the main topic was based. For instance, if the main topic is the Promotion of the Vandellós candidacy, the available local infrastructures (Economy) may be used as the argument on which the promotion is based.

Regarding the Main Topics, our analysis show that the most relevant issues according to the Spanish press are: Promotion of Candidacies (107 articles) and Decision Making Process (85 articles). The other issues appear in fact with smaller frequencies.

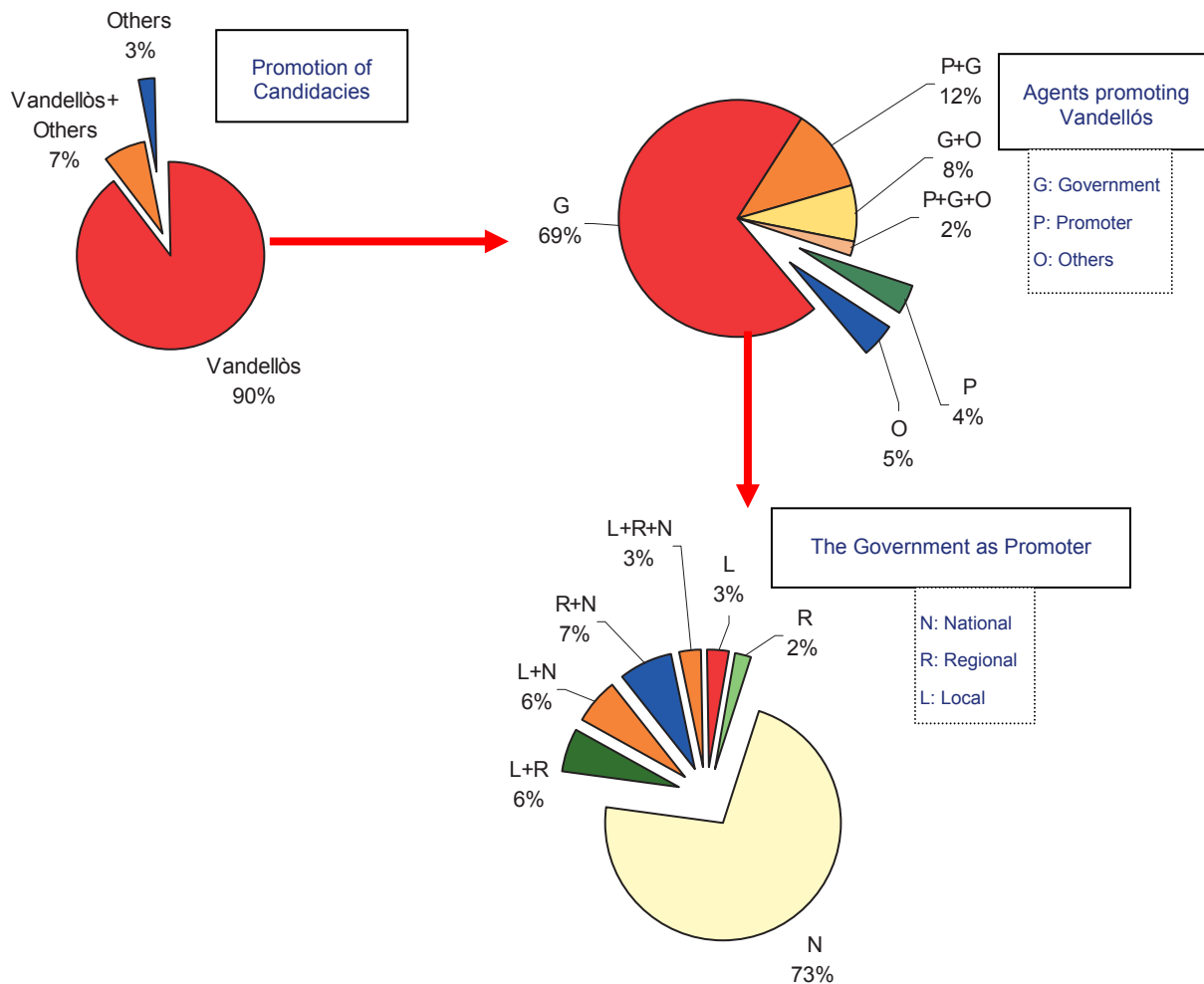


MAIN TOPIC

LEGEND: “Promo”: Promotion of the Candidacy / “DMP: Decision Making Process/
RD: Research + Development

Each of the main topics were detached in sub-categories. As an example we show the results of the detailed analysis of the most significant main topic: “**Promotion of candidacies**”.

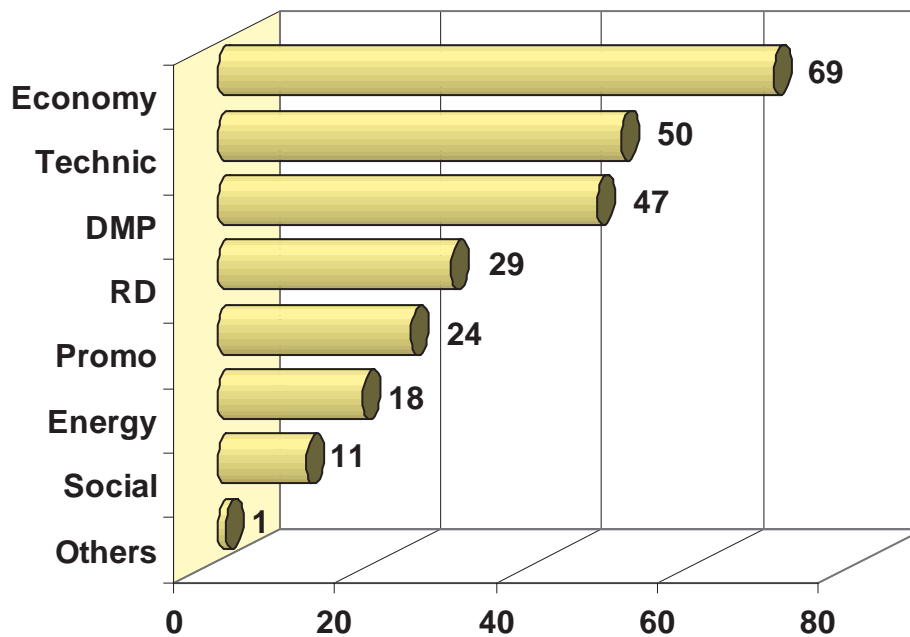
The very first comment regarding the promotion of candidacies, as could be expected, is the leading position of Vandellós. As the next graphic shows, 90% of the articles dealt with the promotion of the domestic site, while only 10% mentioned the promotion of other candidacies, France and Japan basically (7% of them appeared together with the Vandellós promotion)



When analysing whom is the agent promoting the Vandellós candidacy we find out that the Government has been the main supporter of the Vandellós Candidacy (91%). Next, as could be expected, we find the Ciemat (the project promoter), either on its own or together with the Government (18%). The candidacy was also supported by “others”, such as nearby universities, regional and local non official institutions, and so on. Those “others” were mentioned in 15% of the articles in which the promotion of Vandellós was the main topic.

Going to the details of the “Government” as promoter of the Vandellós Candidacy, we find that the National Government has been the one leading the promotion. The Regional government (20%), and the Local Government (18%) do appear, both by their own or with other of the governments in our country, but to a lesser extent.

As far as the secondary topics are concerned, as the next Graphic shows, they present a quite different pattern if compared with the one of the main topics. The economic and the technological dimensions of the project are the ones reaching higher relevance.



SECONDARY

LEGEND: "Promo": Promotion of the Candidacy / "DMP: Decision Making Process/
RD: Research + Development

Let see the details of the most important secondary topic: **Economy**

Looking at the economy sub-categories we find that "investments" in the project is the most important economic issue in the press' view. This sub-category, either on its own (29%) or together with other sub-categories appeared in more than half of the articles (54%). Within investments, the most mentioned ones were those corresponding to the global investment (56.8%).

"Effects of the investment" also hold a relevant position (33%) More detailed analysis pointed out that the more highlighted effects were the ones expected at the local level although the regional effects achieve more relevance when treated as secondary topic.

Regarding "infrastructures" (38%), the analysed articles gave special attention to the available ones (roads, ports, those linked to the existing NPP, etc.) and not so much to the ones to be done in order to satisfy the ITER requirements. This could be explained by the fact that infrastructures were mainly used as an argument in order to support the Vandellós candidacy.

Another economic sub-category refers to the "employment" ITER will generate, especially at the local level but also at the regional, national, and even European Union level. The stories trend was that of emphasizing the local dimension of the expected ITER effects.

Those are just a couple of examples of the way in which both, main and secondary topics, have been analysed.

5. Conclusions

The main ideas we would like to underline regarding our Content Analysis, besides the ones already mentioned, are the following ones:

- The institutional support to the candidature, i.e. the promotion of the Vandellós candidacy, has been the axis of most articles. This institutional support, at both official and non-official, and in the local, regional, and national field, was closely linked to the follow up of the decision making process.
- The energy debate has held a relevant position in the ITER stories. This debate seems to be unavoidable connected to the fusion project itself.
- The economic dimension of the project has captured a lot of the press attention. The investments in the project, the effects of such investments, and the infrastructures have been the more mentioned economic aspects of ITER,
- Technological issues, both from the “general information” point of view (background topics) and from the “detailed information” side (main / Secondary topic) have also received quite a lot of attention,
- The Social dimension, although in limited percentage, has also been considered. The questions pointed out by the public opinion “voice” clearly reflect the results obtained in previous EISS-Vandellós studies: Local Community support and lucid awareness of the social change ITER would imply for the area.

6. Discussion

As a final discussion we would like to stress that we feel these results present interesting implications for the design of a potential public information process (the starting point of any public participation process).

On the one hand, this content analysis study gives us a picture of the way in which the Spanish press have been spreading information about ITER.

This picture is, of course, limited by the analysed cases sample but also by the period of time covered in our study. It should also be remembered that this was a quite special period, as it was basically dominated by the follow-up of the decision making process and the promotion of the Vandellós Candidacy. In other words, “news” was unavoidable linked to such a decision-making process and not to the regular dissemination of a technological matter. Bearing in mind these constraints, we still consider this analysis provides relevant inputs about the way in which the press spread information about the ITER project.

On the other hand, the previous EISS-Vandellós studies allowed the identification of the local population demands and preferences in terms of information about ITER.

The local population’s preferred means of receiving information on the project are the mass media (80%), followed by specific, detailed printed information (70%). Therefore, it is quite evident that mass media, including written press, are the most preferred information source at the local level. Newspapers have a role to play in the dissemination of ITER, in particular, and of fusion energy, in general.

Regarding the contents that the information must covered in the locals' opinion, we find: the worldwide scope of the project, its experimental nature, its characteristics, the economic dimensions, the phases in the project: planning for the future, and social cohesion". Given the social dynamic in the area, the "research" aspect of the project should be emphasised. It would also be essential that "technical" information be completed and complemented by "social" information: the international dimension of the project, the prestige it will bring to the area, energy demand / needs, effects on the local socio-economic structure, and so forth.

An interesting comparison could be established between the media "performance" and the local population preferences in the case of ITER.

The media, in its usual way of treating news, have covered quite precisely some of the local population demands (such as the world-wide scope of the project /ITER members; the technical characteristics of the project; the economic dimensions; the project phases, the energy "issue"), but not all of them. This "missing contents" would of course require special attention in the future if ITER finally comes to Vandellós.

Although limited on scope and, obviously, "local", we feel some of this results may be of interest for further dissemination activities related to ITER or to Fusion energy.

E. REFERENCES

- Blanch, J.M. (2003) *Public Involvement Around Vandellòs ITER Site: EISS3 – Stage 2. Public Participation: Theoretical Models*. November 2003 Deliverable
- De Marchi, B. (2000) « *Learning from citizens: A Venetian experience* ». *Journal of Hazardous Materials* 78, 247-259. Elsevier Science.
- Doval, E, Prades, A., Riba, D., Solá R. (2003) *Public Involvement Around Vandellòs ITER Site: EISS3 – Stage 2. A Picture of the Media Coverage of ITER: Content Analysis of the Spanish Press*. 25/11/2003
- Glaser, B. y Strauss, A.L. (1967). *The Discovery of Grounded Theory*. Chicago: Aldine.
- Joss, S (1998) “*Danish Consensus Conferences as a model of participatory technology assessment: an impact study of consensus conferences on Danish Parliament and Danish public debate*”. *Science and public Policy* Vol 25 -1 (2-22) Beech Tree Publishing, England
- Krippendorff, K.(1980). *Content Análisis: An Introduction to its Methodology*. Beverly Hills. CA. Sage
- Lombard, M., Snyder-Duch, J., & Bracken, C. C. (2002). *Content analysis in mass communication: Assessment and reporting of inter-coder reliability*. *Human Communication Research*, 28, 587-604
- Muñoz, J., Doval, E., Riba, D., Prades, A., Solá, R (2003). *Public Involvement Around Vandellòs ITER Site: EISS3 – Stage 2. Interviews to Researches of the Surrounding Area*. November 2003 Deliverable.
- NEA (2002). *Society and Nuclear Energy: Towards a Better Understanding*. NEA - OECD Secretary General Report Desk Study / 2001-2002 Work Programme-
- Patton, M.Q. (1990). *Qualitative evaluation and research methods*. London: Sage
- Pidgeon, N., Henwood, K.(1996). *Grounded Theory: practical implementation*. In J. T. Richardson (Ed.), *Handbook of Qualitative Research Methods for Psychology and the Social Sciences* (pp. 86-101). Leicester: The British Psychological Society.
- Popping, R. (1988). *On agreement indices for nominal data*. In Willem E. Saris & Irmtraud N. Gallhofer (Eds.), *Sociometric research: Volume 1, data collection and scaling* (pp. 90-105). New York: St. Martin's Press.
- Prades, A., Solá, R. Garay, A, Riba, D. Doval, E. (2003) *Public Involvement Around Vandellòs ITER Site: Planning of The Public Participation Process*. 30-03-03 - INF-EISSV-SE2.1-03, 2003
- Prades, A., Solá R. (2003) *Public Involvement Around Vandellòs ITER Site: EISS3 – Stage 2. The Aarhus Convention*. Deliverable SE.2.6-003. 30-09-03
- Riba. D., Viladrich, C., Muñoz, J., Doval, E Solá, R., Prades, A (2002) “*Public Involvement Around Vandellòs ITER Site: Final Report*. INF-EISSV-SE2.5-001. 16-12-2002
- Silina, M & Martins, J, 2003 (*Eco Forum*). “Public Participation Campaign Website” <http://www.participate.org/convention/>
- Solá, R., Riba, D., Prades, A., Doval, E., Viladrich, C, Garay, A., Muñoz, J.(2003) “*Public Involvement Around Vandellòs ITER Site. EISS3-Stage 2 Work specification*”. ES-EISSV3-26. 18-07-2003
- Stec, S & Casey-Lefkowitz, S (2000). “*The Aarhus Convention: An Implementation Guide*”. UNITED NATIONS. New York and Geneva, 2000
- Strauss, A. & Corbin, J. (1998). *Basics of qualitative research. Techniques and procedures for developing grounded theory*. London: Sage.

**Public Community Support & Involvement around Vandellós ITER Site
(EISS-Vandellós 2002/2003). Final Report**

Solá, R.; Prades, A.; Riba, D.; Doval, E.; Muñoz, J.; Garay, A.; Viladrich, C.

45 pp. 28 figs. 45 refs.

Abstract:

The Report summarizes a year and a half research on the social perception and expectations regarding the possible siting of ITER in Vandellós carried out in the framework of the European ITER Site Studies (EISS). The aims were to examine the needs and preferences in terms of public information and communication; to explore the risks and benefits the community links to the Centre; and to analyse the local expectations concerning public participation. A methodological strategy integrating qualitative methodologies [semi-structured interviews to key informants at the local level, and to key research groups in the surrounding area, together with a focus group with local opinion leaders], and quantitative techniques [Computer Assisted Telephone Interview (CATI) applied to a sample of 400 participants] was implemented. The local community has lived with complex and high risk facilities for decades, thus local people has a strong familiarity with technological and energy production systems, but no experience with large research installations.

In such a context the global opinion towards the possibility of hosting ITER was clearly favourable, and linked to a strong demand in terms of public information and participation.

Percepción Social y Potencial Proceso de Participación Ciudadana ante la Candidatura Española para Acoger ITER en Vandellós (EISS-Vandellós 2002/2003). Informe Final.

Solá, R.; Prades, A.; Riba, D.; Doval, E.; Muñoz, J.; Garay, A.; Viladrich, C.

45 pp. 28 figs. 45 refs.

Resumen:

El Informe sintetiza los resultados obtenidos al evaluar la percepción social de la posibilidad de acoger ITER en Vandellós en el contexto de los *European ITER Site Studies* (EISS). Además de evaluar la percepción social de la posibilidad de acoger esta nueva gran instalación internacional, se analizaron las necesidades, preocupaciones y preferencias, tanto de los actores clave de la zona como del colectivo investigador del entorno próximo, asociadas a un potencial proceso de participación pública. La aproximación metodológica combinó técnicas cualitativas y cuantitativas, en concreto, entrevistas semi-estructuradas, cuestionario a muestra representativa de la población del entorno, y grupo de discusión. Se analizaron las percepciones y expectativas de los principales actores locales y regionales, tanto del ámbito institucional como del social. Adicionalmente, se llevó a cabo un análisis de contenido de las noticias aparecidas en la prensa regional y nacional.

Los resultados mostraron una percepción muy favorable de la posibilidad de acoger esta gran instalación de investigación, firmemente asociada a unas demandas muy claras en términos de información, planificación y participación pública.

CLASIFICACIÓN DOE Y DESCRIPTORES

S29

ITER TOKAMAK; SOCIAL IMPACT; SOCIO-ECONOMIC FACTORS; PUBLIC OPINION;
PUBLIC INFORMATION; SPAIN; HAZARDS; PUBLIC RELATIONS.