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**Evaluation of Public Participation in EIA's focused on
Renewable Energy Projects in Greece**

**MSc. Environmental Management and Sustainability
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Synopsis

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This Master Thesis researches the effectiveness of Public Participation in EIA's with focus on renewable energy resources projects in Greece.

The following research question and sub questions are held:

“How inclusive and effective is public participation process in projects of Renewable Energy Resources in Greece?”

- **How inclusive is public participation process in Greece compared to Danish process? (Can the Greek legislation adapt elements by Danish legislation regarding EIA and public participation)**
- **Should there be different and special approach of public inclusion in regards to Greek context compared to Danish?**

The assessment of effectiveness of public participation is developed through the comparison of Greek legislation with other international regulations as well the Danish legislation. The confrontations were elaborated according to different filters which represent different types of effectiveness.

The conclusions reveal that public participation in EIA's in Greece is not highly effective nor inclusive. The level of participation that is promoted and required by Greek legislation is the information dissemination of the assessed project. However, the whole process is quite transparent since all the information are available to the public if required. There are many elements that Greece can adapt by Danish legislation, although the most important is that the national legislation needs to be more binding for the stages of public inclusion. The economy of the country as well as the role of the competent authorities are identified as two aspects that the two countries differentiate a lot and due to these factors, recommendations towards the improvement of public participation in Greece cannot use as example some good practices of Denmark.

Preface

This report consists the Master Thesis developed by Lamprini Kolona, Master student in the program “Environmental Management and Sustainability Science” of the “Faculty of Engineering and Science” of Aalborg University. The report was elaborated during the semester period of February- June 2017.

I would like to express my gratitude to my semester supervisor Helle Nielsen for her guidance and mentoring during the process of development of this Thesis. Additionally special thanks to all the interviewees Alexandra Poravou, Panayotis Vouros, Aristotelis Botzios and Catrine Biering for their will to participate and share their experience and knowledge about EIA’s for the evolution of this report.

The content of the interviews can be provided if requested by the author of the Master Thesis.

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1. Introduction

The purpose of this Master thesis is to assess the effectiveness of Public Participation in EIA's in Greece and to give recommendations for improvement. Since there is not provided an evaluation framework, neither by the country to be assessed nor by international legislation, the approach on this concept has been developed by the confrontation of the present Greek legislation supported by interviews conducted in Greece with different international and national legislations and regulations regarding the public participation in EIA's.

In order to make the report more reliable regarding the findings and recommendations which answer the research question and sub-questions, the confrontations are designed and developed according to 9 filters which represent the four types of effectiveness developed by Chanchipritcha (Chanchitpricha & Bond, 2013).

Danish legislation for public participation in EIA's plays a key role in the development of recommendations since is the only national legislation, besides the one which is the research object, which is included in the analysis chapter, however it functions as an input for the assessment of Greek legislation and is not an element to be analyzed.

2. Problem Analysis

The chapter of Problem Analysis includes different subchapters which are mandatory in the identification of the research question and subquestions which are to be answered in this project. The elements which are presented here are different inputs which are used later in chapters of analysis and discussion. However, a better perception of legislations about public participation and EIA's is mandatory. Each subchapter of problem analysis articulates a different element.

2.1. Environmental Assessment and Environmental Impact Assessment

Initially is important to refer the explanation of the broad term of Environmental Assessment before narrowing and focusing on the concept of EIA. As environmental assessment is defined the process of which are taken into consideration the possible negative impact on the environment early enough before the decision-making stage. By the European Union, the environmental assessments are characterized by two different types of assessment, the Environmental Impact Assessment (EIA) and the Strategic Environmental Assessment (SEA). The difference between those two types is that EIA's have as main focus individual projects such as motorways, factories instead of SEA's which are dealing with public plans and programs (Commision, nd).

This chapter includes different aspects of Environmental Impact Assessment, such as the legislation that supports it, the methodology regarding the stages that are proposed as well as the way that Greece implements it in national level.

2.2. Legislative Framework

2.2.1. EU Directive for Environmental Impact Assessment (EIA)

The European Union is a political and economic union and consists of 28 European countries which are referred as Member States. The European Union was established after the Second World War. Initially, the core character of European Union was economic, however through the years developed and nowadays has a political nature as well. The European Union is a democratic body which follows the rule of the law and all the decisions which are made are expressed as treaties and agreed by all the participant countries. The goals of each treaty can be achieved by different types of legal act.(europa.eu, nd) Some of them are binding for the Member States and others are not. Briefly are presented the different types of legal action (europa.eu, Regulations, Directives and other acts, nd).

Regulation	➤ Is a binding legislative act and all the Member States are obliged to implement it.
Directive	➤ Is a legislative act that presents the goals that Member States must achieve. Although it can be applied and implemented according to Member national legislation.
Decision	➤ It is a binding act only to whom it is addressed.
Recommendation	➤ Is not binding. A recommendation allows the institutions to express a suggestion for an act.

Table 1: Types of Legal Action, (europa.eu, Regulations, Directives and other acts, nd)

2.2.2. EIA Directive 2014/52/EU –Legislation Context

The EIA Directive (85/337/EEC) was first launched in 1985 and has been developed for a big range of different defined projects. Since then EIA has been amended three times in 1997, 2003 and 2009. Regarding the three evolutions of EIA through the years is important to underline the main changes(Commision, Environmental Impact Assessment-EIA, nd):

- Since 1997 the EIA Directive is in the same line with UNECE Espoo Convention on EIA in a transboundary context. The scope of EIA was broadened and the numbers of projects which need a Mandatory EIA are more. Also, the stage of screening has evolved as have been established more screening criteria.
- In 2003 the Directive evolved in order to include the Aarhus Convention in terms of public participation in decision-making and access to justice in environmental matters.
- In 2009 the Annexes 1,2 of EIA Directive were evolved by adding projects which are related to matters of transport, capture and storage of CO₂.

The EIA Directive guides the Member States on how to assess properly a defined project in order to minimize the potential negative impacts. Therefore initially distinguish the process of assessment according to the size of the project. It provides

three different Annexes according to how big impacts can be produced by each project.(Commision, Environmental Impact Assessment-EIA, nd)

- Mandatory EIA: Is required for the projects which belong in Annex 1 as they are considered to have essential impacts on the environment. Projects that belong in Annex 1 usually belong in bigger scale projects such as long distance railway lines, motorways, installations for disposal of hazardous waste etc.
- Discretion of Member States (Screening process): For defined projects which don't correspond in Annex 1, the Member State needs to decide whether the specific project requires an EIA or not. In this case, is required a screening process by which will be identified the final decision. Although the Member States need to take into consideration the criteria of Annex 3.

2.2.3. EIA Methodology

As was referred above, the legislative action, in this case a Directive is not binding, allowing the Member States to adapt the context and the minimum requirements that are needed by each participant country according to the national legislation. Therefore the EIA Directive doesn't provide a clear context with a specific methodology which could be common for all the participants. Although in 2012 the European Union Network for the Implementation and Enforcement of Environmental Law released a guide for the Member States in order to provide more precise information regarding the form and the content of EIA's according to EIA Directive 2011/92/EU. In this guide are explained many and different stages, however not all of them are mandatory for the conduction and implementation of EIA by the Member States. Some of them are regarded as best practices and are included in the national legislation of some participant countries. Hence below are illustrated two different graphs. In the first one are presented all the stages and the second one only the stages that are required to be included by the Member States (Enforcement, 2012).

1. Project Preparation	<ul style="list-style-type: none"> The developer prepares the proposals for the project
2. Notification to Competent Authority	<ul style="list-style-type: none"> In some Member States is required for the developer to inform the Competent Authority before the development submission. It may also have an informal character
3. Screening	<ul style="list-style-type: none"> The Competent Authority decides if the project requires EIA or not. This can also happen in the notification stage before the submission of the project. In the screening stage the project is made public available.
4. Scoping	<ul style="list-style-type: none"> In this stage the developer may request an opinion from the Competent Authority regarding the aspects that need to be covered in EIA. To prepare the opinion the authority needs to consult the environmental authorities.
5. Environmental Studies	<ul style="list-style-type: none"> The developer carries out the studies to prepare the Environmental Information
6. Submission of Environmental Information to Competent Authority	<ul style="list-style-type: none"> The developer submits the Environmental Information as well as the development consent
7. Review of Adequacy of the Environmental Information	<ul style="list-style-type: none"> In some Member States is required by a third independent party to evaluate the information before the Competent Authority decides. In other Member States the Competent Authority is adequate for the evaluation. In case the information is not sufficient the Competent Authority may require more information
8. Consultation with Statutory Environmental Authorities, other interested Parties and the Public	<ul style="list-style-type: none"> The information must be available to the authorities with environmental responsibilities as well as to other organizations, stakeholders and public. They must have the opportunity to comment before the decision making.
9. Consideration of the Environmental Information by the Competent Authority before making Development Consent Decision	<ul style="list-style-type: none"> The environmental information and the results of consultation must be taken into account before the decision making by Competent Authorities for Development Consent.
10. Announcement of Decision	<ul style="list-style-type: none"> The decision must be made available to the public including the measures to mitigate the environmental effects of the project
11. Post-Decision Monitoring if Project is granted Consent	<ul style="list-style-type: none"> There might be a need to monitor the effects just after the implementation

Table 2 Stages of EIA that are proposed by EU Directive to all participant countries, (Enforcement, 2012)

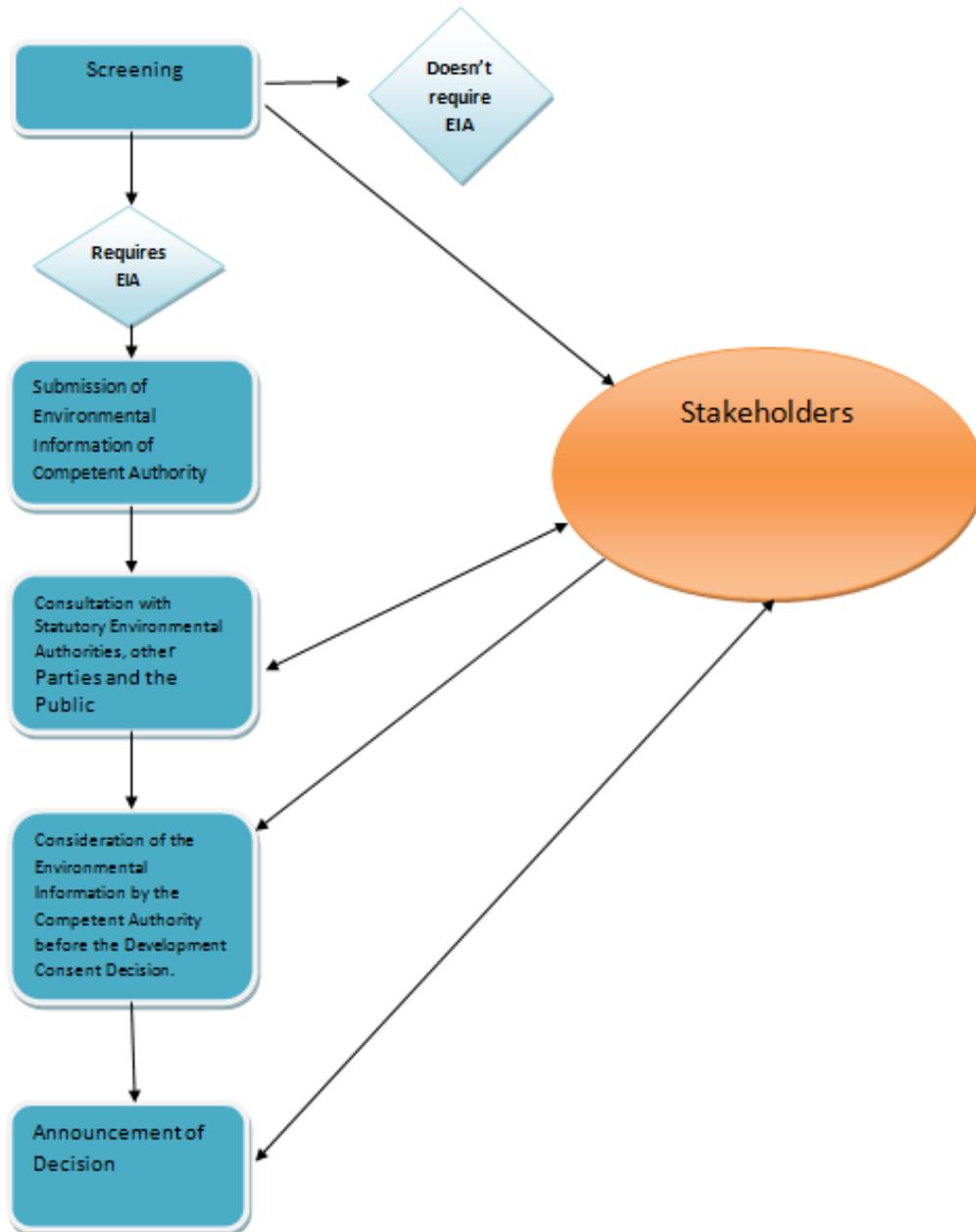


Table 3: Stages that are required by EU Directive as minimum requirements for EIA'S Authors interpretation inspired by, (Enforcement, 2012)

2.2.4. EIA Directive 2014/52/EU and Public Participation

Having been referred explicitly to EU Directive and the provided stages for EIA's, this chapter focuses on the articles 6 and 7 of the same Directive where is provided information regarding public participation in the specific context.

According to the Article 5 of Directive 2014/52/EU the information of an environmental impact assessment which should be publicly available consists by: (Commission, EU Directive 2014/52/EU, n.d)

- General description of the assessed project, providing information about size, location and design.
- Provide alternatives solutions and an explanation on why the developer selects the specific one.
- Analysis of the measures which will be taken for the protection of the environment.
- Data which identify specifically the effects on environment by the construction of the project
- Non-technical summary

The Article 6 of the same Directive focuses more on the aspect of concerned authorities and characteristics of their update process regarding the assessed projects and decision making.

- The Member States shall ensure that the concerned authorities and public who are affected by the development of a project should be informed regarding the development consent and also be able to express their concerns.
- The concerned public should be informed through public notices or by other media regarding: (Commission, EU Directive 2014/52/EU, n.d)
 - Development consent of the project
 - Details of the competent authorities which are responsible for the decision making, the competent authorities by which the public can ask for information and those on whom the public can express their questions and concerns.
 - Nature of possible decisions if provided
 - Explanation of the time and places where the information will be available.
 - Details regarding the public consultation
- Member States shall set ensure that the following information will be available to the public with reasonable timeframe: (Commission, EU Directive 2014/52/EU, n.d)
 - The arrangements for informing the public such as public newspaper and public consultation.
 - For different phases of informing and consulting the public. The sufficient provided time should allow an efficient participation in the decision-making subject for affected authorities.
- The concerned public shall be able to make comments and express ideas regarding the assessed project before the decision-making stage. For that reason should be provided sufficient chances to participate in the whole process. (Commission, EU Directive 2014/52/EU, n.d)

2.3. Greek Legislation for EIA

In the following chapter is analyzed the Greek legislation regarding Environmental Impact Assessment. In order to make the concept more comprehensible for the reader, it is essential to explain some elements that are used. Greek legislation and decisions are published always in the “Newspaper of Hellenic Government” and continuously the administrative bodies and cities are able to be informed. In the development of this chapter was used legislation of EIA as well as an amendment of the same legislation which addresses the public participation in this context.

The Ministry of Environment and Energy is the superior authority of the country which interprets and integrates into the national legislation the Conventions and European legislation whose is a participant and has agreed to follow them respectively. Additionally, is the body that develops the legislation and the requirements for environmental licensing for different projects which come after the confirmation of environmental Impact assessment. According to the Greek legislation, the projects depending on their potential size of impacts on the environment are classified into different categories (Republic, 2011). The projects for which is needed Environmental Impact assessment are classified in the category A (with subcategories A1 and A2). Furthermore, there is category B where the projects need an assessment which in fact is a small comparison with some minimum requirements that the project needs to meet. In subcategory A1 are classified all the projects and actions which might cause highly significant impacts on the environment whereas in subcategory A2 are classified those projects which might cause slightly less significant impacts compared to projects in subcategory A1 (Republic, 2011). The category B is addressed for projects with local and not significant impacts on the environment. Following are presented the general stages that are necessary for Environmental Impact Assessments for both Categories A1 and A2. Initially, it is referred that there is optimal for the planner to prepare a preliminary study before the submission of the final EIA and the competent authority can consult the developer on which elements and environmental demands should focus on the assessment (Republic, 2011). The given time for the competent authority to check the preliminary assessment and ask for more data from the developer is ten days. After the final check of the preliminary assessment, the report is sent to the different authorities that their confirmation as well is needed, such as forestry service, Ministry of Civilization and Tourism etc. For the subcategory A1, the competent authority which is responsible for the overall confirmation is the Ministry of Environment and Climate change whereas for the subcategory A2 is the decentralized administration. In order to understand what decentralized administration means is essential to refer that Greece is separated in different regions and each region is composed of different and many municipalities. The decentralized administration is the authority body located usually in the biggest municipality of the region and addresses different concepts for different stakeholders of the whole region (Republic, 2011). The elements that the competent authority can consult the

developer are: the alternatives which are to be assessed, the special assessments that need to be addressed according to the nature of the impacts, the different authorities that the developer needs to contact, as well as general consultation during the development of the assessment. For instance, all the developers need to consult and get confirmation by the Greek Ministry of Civilization and Tourism in order to assure that the assessed project is not oriented and will not be located in an area with archaeological interest. In case that the project is located close to forests or the impacts of the project affect forests, the developer needs also the confirmation of the Forestry Service (Republic, Specialisation of the process regarding inform public and participation of the interested public during the public consultations for environmental licensing of projects in category A , 2014). If the developer decides that wants to develop a preliminary study can get all these necessary and essential confirmations by the authorities at this stage and doesn't have to repeat the process in the final EIA report. The second case is that the developer doesn't proceed in a preliminary study and continues directly to EIA. After the submission of the report, the competent authority has 15 days in order to check the EIA regarding the validity of the recorded data provided by the developer. After the first control of the EIA if the developer hasn't done the preliminary study the competent authority is responsible for sending the report to all the administrative bodies as those that were referred above, such as Ministry of Civilization and Tourism. Next stage in the process towards the final confirmation is the publication of the EIA in newspaper so it can be visible and open for public consultation and raise awareness regarding the nature of the project (Republic, Specialisation of the process regarding inform public and participation of the interested public during the public consultations for environmental licensing of projects in category A , 2014). The newspapers that are suggested by the legislation are either a regional daily or a national daily newspaper. Furthermore, the EIA has to be published in electronic form on the website of the competent region. The information that should be included in the publication is explained below: (Republic, Specialisation of the process regarding inform public and participation of the interested public during the public consultations for environmental licensing of projects in category A , 2014).

- 1)** The title and the subcategory of the assessed project
- 2)** The location of the assessed project or actions, as well as the region or municipality which addresses the process of environmental licensing.
- 3)** The developer of the project or action.
- 4)** The competent environmental authority which is responsible for the project.
- 5)** The regional services which are responsible for providing information to the interested public as well as receiving their comments.
- 6)** The starting and ending dates which the public consultation will take place.
- 7)** The starting and ending date that the concerned public can submit their views.
- 8)** Notification of the link that the EIA is also published.

- 9) The developer invites the municipal body or the council of a municipality to express their opinion.

It is significant to refer that the cost of publication is borne by the developer. The legislation proposes for the public to express their concerns either written in a form or even electronically to the competent region. The interested public has every right to be informed regarding the nature of the project as well its impacts and express the potential concerns with substantiated views, within the provided period of time. The given time for consultation before the final decision is 45 days for projects which belong in subcategory A1 and 35 days for those which belong in subcategory A2. After the publication of the EIA and the end of the consultation, the municipality where the project or action is planned need to transmit to the competent regional council all the evidence which indicate that the publication met all the legal requirements as well as the concerns of the interested public (Republic, Specialisation of the process regarding inform public and participation of the interested public during the public consultations for environmental licensing of projects in category A , 2014). The transmission needs to take place on time in order to not exceed the foreseen deadline. Following the Regional body is responsible for transmitting the file to the competent authority. The file which is transmitted to the competent authority compensates:

- i. The opinion of the regional council regarding the assessed EIA.
- ii. The opinion of the municipality's council regarding the assessed EIA.
- iii. The gathered opinions of the concerned public.

In case that there is omission of either the Municipality's council or Region's council or even from the concerned public to express their opinion within the defined period for consultation this doesn't postpone or prevent the progress of the process towards the final decision which is to be made by the competent authority body. The time which is provided by legislation for evaluation of all the concerns and views is 20 days after the end of the consultation. The final decision from the competent environmental authority needs to be made within 25 days after the end of the evaluation of concerns. The final decision either is positive or negative needs to be justified with arguments by the competent authority (Republic, Specialisation of the process regarding inform public and participation of the interested public during the public consultations for environmental licensing of projects in category A , 2014). In case the EIA gets the necessary confirmation by the Ministry of Environment this decision is valid for ten years. The validity of the confirmation can be expanded four years in case the project has EMAS or can be expanded for 2 years if has ISO (Republic, Law Number 4014 Environmental Licensing of projects and actions, 2011). Additionally, in case of programmed or not programmed control after the project starts to function, are identified some problems such as more impacts than those expected may be

required some changes in the functionality of the project. In the graph below is presented the process of EIA in Greece:

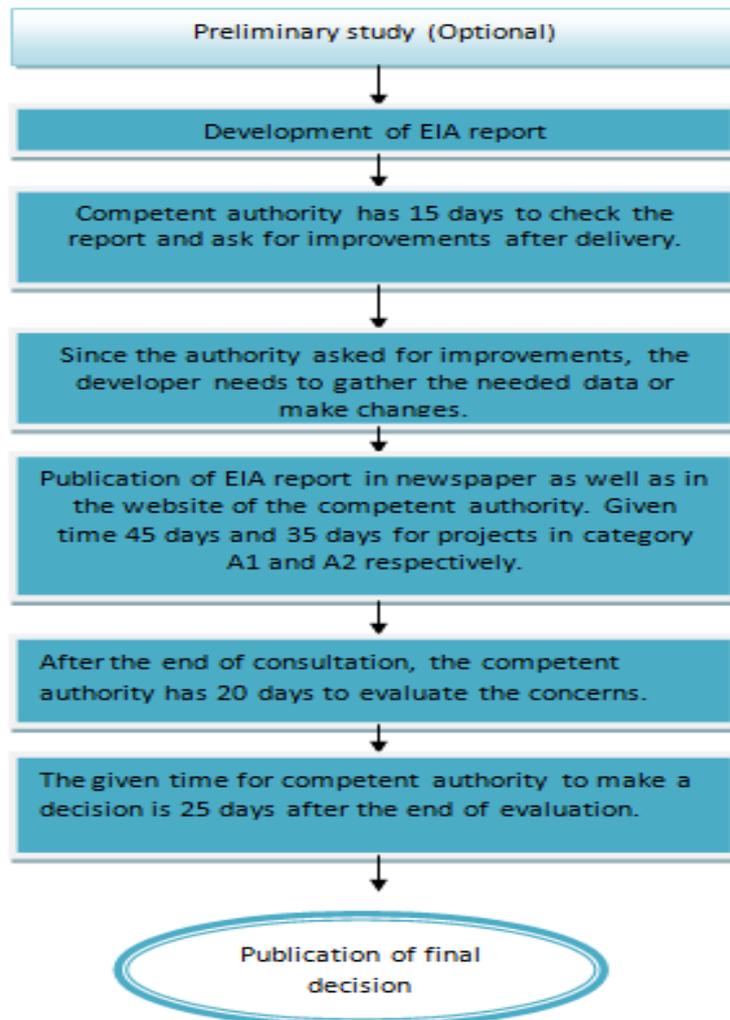


Table 4: Stages of EIA in Greece, (Republic, Law Number 4014 Environmental Licensing of projects and actions, 2011)

2.4. Danish Legislation for EIA

The concept of Environmental Impact Assessment initially was presented in the Danish context and regional planning procedure in 1989. After the modifications of EU Directive for EIA in 1997, the regulations in the Danish legislation changed accordingly. Since then, there has been a matter of concern for all the parties which are affected by the nature of the EIA. The affected parties are the public, planners, administrative bodies, as well as county administrations which are also the responsible authorities for the implementation of EIA rules. It is referred that in the beginning of the presentation of EU Directive to the Danish legislation the reaction was not absolute positive as there were many concerns regarding the country's need to have some external regulations on subjects which were already been taken care of. Although despite the first reactions, EIA proved its value after many success stories in different Member States and finally integrated by the national legislation. (Commission, n.d) The aspect which made different and significant the EIA concept is not the problem that addresses but the methods that present which until then didn't exist. Specifically, the EIA was adapted and accepted by the Danish policy when the pig-farming became an issue to be addressed. Since then the planners and developers have obtained the needed experience and capabilities to use EIA to solve this kind of problems. The characteristics that make the EIA so important is that it is regarded a holistic oriented method and additionally promotes the public participation in the decision-making process for projects of this kind. (Commission, n.d)

Regarding the process of EIA in Denmark is essential to refer that the projects according to their size and possibility to affect the environment are divided and correspond to different categories. The identified categories are identical to the Annexes provided by EU Directive and composed by three different. The Annex 1 addresses projects which have a high possibility to have significant and dangerous impacts on the environment and an EIA is a prerequisite. For projects listed in Annex 2, the screening process identifies whether an EIA is needed or not. This can be achieved on the basis of a number of criteria from the Annex 3. The criteria correspond to three different groups: the location of the project, possibility of impacts on the environment and general project's characteristics. After the screening process is decided whether the assessed project will proceed to an EIA or will continue the process of licensing without a further technical procedure. (Commission, n.d) Additionally, in the screening process, the dialogue between the competent authority and the developer is required in order to communicate the possibilities of changes in the project in order to minimize the potential impacts on the environment and subsequently doesn't require an EIA. The decision of the screening process needs to be published to people and the same time there is a direct dialogue with the developer for possible ideas. In case an EIA is not required, the public needs also to be informed about the final decision. After the screening process, the next stage which is required is the first round of consultation. This stage lasts typically 2-4 weeks, and the aim is to limit the theme of the EIA to the significant impacts

that may occur on the environment. It is important to refer that in this stage the proposed alternatives not only by the developer but also by the public and stakeholders must be taken into consideration. Next step within the scoping stage is the development of the environmental report, where also the ideas by the public were taken into consideration. Continuing the county council is the responsible body to decide if they will support the development of the project or not. If the answer by the authorities is positive, then the procedure continues with a second round of consultation, the EIA report needs to be published and available for 8 weeks to the concerned public in order to express concerns, ideas and questions. At this stage, the project is examined also if it is induced in Chapter 5 of the Environment Protection Act. If it is induced then the EIA report must be accompanied by a proposal for an environmental permit. After this stage, the final decision must be published explaining the reasons that led to this decision as well as guidelines for appeals. The given time for somebody to protest is 4 weeks since the day of publication (Commission, n.d).

The Danish EIA procedure indicates some differentiations compared to other (Kornov, Thrane, Remmen, & Lund, 2007) countries. One of the differences is that the developer needs to provide all the necessary information and data to the competent authorities, but the county is responsible for the conduction of the assessment. The county is responsible for the Environmental Impact Statement (EIS). In the Danish context, the EIA is consisted by three different documents. First document the preparation of the EIS, which is the basis to develop the second document, a project-specific amendment to the regional plan. The third document consists the license which is needed according to the nature of the project (Kornov, Thrane, Remmen, & Lund, 2007).

Below is illustrated a graph which indicates the different stages of EIA procedure in Denmark:

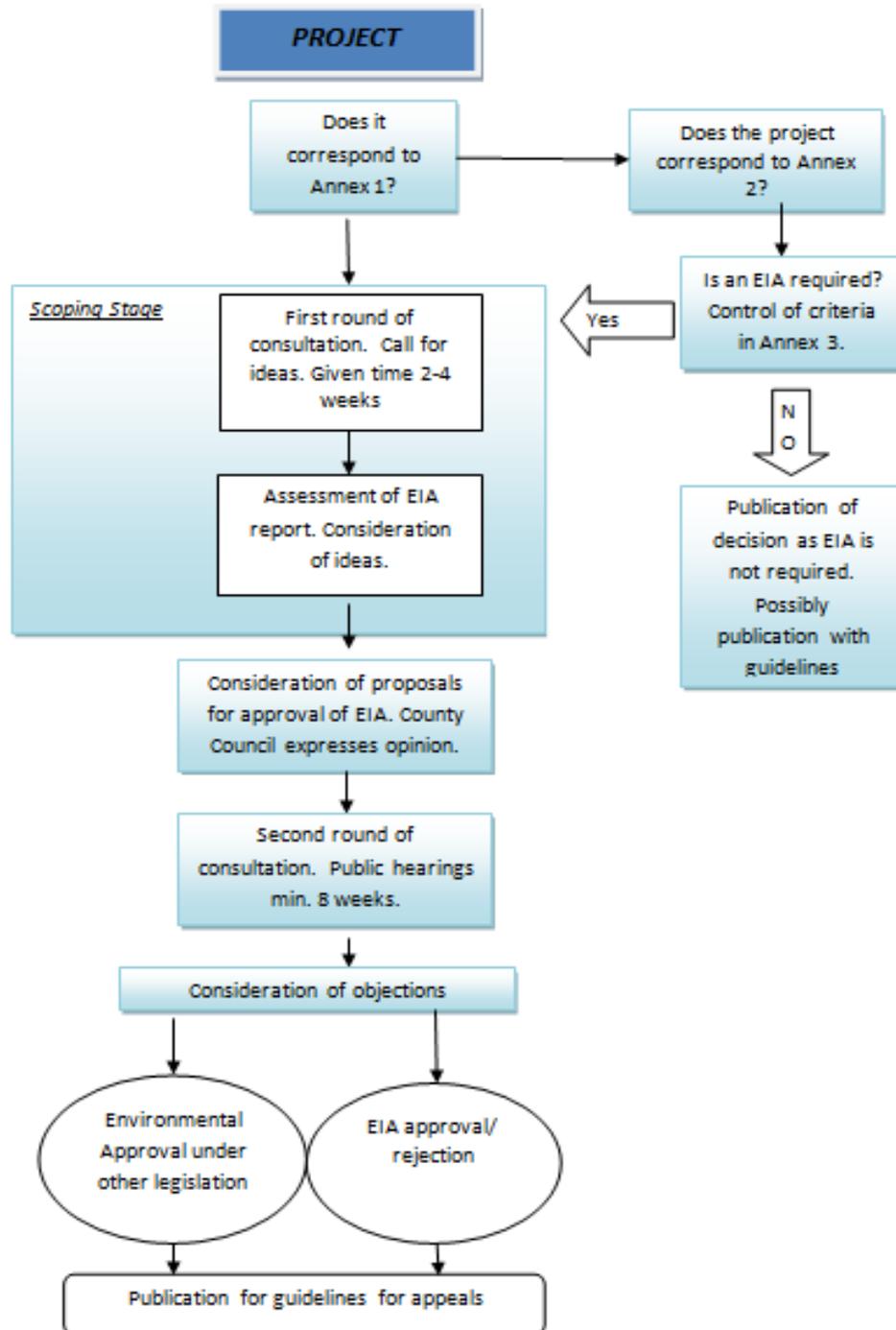


Table 5: Process of Public Participation in EIA's in Denmark, (Commission, n.d)

2.5. Aarhus Convention

In 1998, the United Nations European Commission for Europe held the Convention in the city of Aarhus, Denmark. All the Parties members of the European Commission participated and it was officially named as “Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters”. (EUROPE, 2014) The Convention, articulated clearly and present the ideas of the right to a healthy environment for present and future generations. The mechanisms to ensure it, known as provisions, were part of every Party’s national jurisdiction. The three provisions were: the access to environmental information, public participation in the decision-making and access to justice. These provisions are applied to any activity, with environmental implications, within the national scope, as long as the activities are listed in Annex I of the Convention. If an activity is not listed in Annex I, then is up to the Member State to decide if these provisions can be applied. Additionally, purpose of the Aarhus Convention is to specify different definitions for what is perceived as public authority and public concerned. Public authorities are regarded governments in local, regional and national level, but not the bodies with legislative capacity. By public concerned is understood the public affected or likely to be affected in the environmental decision-making and those who are interested in the environmental decision-making such as non-governmental organizations. (EUROPE, 2014) In the particular case of the public participation, the relevant public authority is the one who identifies the Public entitled to participate in the preparation of plans and programs related to the environment. Additionally, the public participation must be promoted by every Party at an appropriate stage. As referred above the Aarhus Convention was signed by European Commission in 1998 and was adapted in the European legislation in 2003. The first pillar of Convention regarding the access to environmental information was included in the European Directive 2003/4/EC (Hartley & Wood, 2005). This pillar is characterized by the public’s capability and right to get informed about environmental matters in a wider and easier manner. This results in the conclusion that the responsible authorities should be able to correspond to public concerns and questions for further information within two months since their demand. Additionally, the first pillar encompasses the need to make available the information about environmental matters in more forms. With regards to the second pillar, referred as access to justice in environmental matters, there is a dialogue that there should be released a Directive which will ensure the phenomenon of omissions and acts that offend the provisions (Hartley & Wood, 2005). The third pillar which addresses the concept of public involvement in the decision-making process was integrated into the Directive 2003/35/EC and all the Member States required to implement and support it also in their national legislation. As was mentioned above, after the beginning of the implementation of Aarhus Convention in EU Directive the amendments regarding public participation were various. Below are presented some of them identifying the different characteristics of changes. Initially the matter of timing, as early enough, was underlined regarding different stages of EIA (Hartley & Wood, 2005):

- Request for development consent.
- People should be informed early enough that is required EIA for the project.
- The competent authorities should inform on time the public on where they can find the information regarding the decision-making process as well as where they can submit their questions.
- Information about the public participation.
- The nature of possible decisions.

Another essential element of EU Directive after the integration of Aarhus Convention, is the need to enclose public in the decision-making process early enough and in the most effective way. The EU Directive supports the establishment of timing frames that should be followed by the Member States in order to be clear to the public how much time will be provided for consultations as well as the period of time which is needed to evaluate their concerns and input in the decision-making process by the competent authorities (Hartley & Wood, 2005).

Although the terms effective and early regarding public participation, derived from Aarhus Convention, are underlined by EU Directive the meaning is still rather vague as there are not provided precise terminology and explanation, letting to each Member State the jurisdiction to interpret it according to their perspective (Hartley & Wood, 2005).

2.6. Public Participation and EIA

In chapters above has been referred the term of Public Participation and how the last decades has been taken more seriously into account, either in the development of a Convention-Aarhus or in the integration through different amendments in EU Directive for EIA. It is underlined the importance to inform and consult the interested public on time and before the decision making, although it is up to Member State to define how this regulation will be integrated into the national legislation. Although the Chapter 5 of EU Directive identifies clearly the components needed to be addressed by each Member participant (Kornov, Thrane, Remmen, & Lund, 2007).

- The Member States need to define the public that is concerned
- Identify the different phases in the EIA process where the interested public will receive information and be consulted
- Define the way of the information dissemination
- Define the way of public consultation (Kornov, Thrane, Remmen, & Lund, 2007)
- Make a stable time period where the public consultation will take place for each EIA.

Despite all the regulations and advice on how each Member State should comprehend the EIA process and public participation as a basic component, there are also some

disadvantages or difficulties which may affect the transition of a traditional EIA process to a more inclusive and effective one. Factors that are identified by UNEP (UNEP, 2002), (Lee & Clive, 2000):

- Poverty
- Education level and illiteracy
- Difference in language
- Rural setting of stakeholders
- Local values/culture
- Legal systems

In case there are some of the above factors that make more difficult the transition of EIA procedure, is needed more careful strategy planning on how the stakeholders can be approach and included. For example, the ways of approach differentiate according to the present public. In case a dialogue is not preferred there are some other suitable ways of approach such as leaflets, brochures etc. In case the dialogue is regarded as better solution, different forms of communication can be quite helpful, such as workshops, public hearings, and advisory committee (Kornov, Thrane, Remmen, & Lund, 2007). Different ways of approach will be explained in next chapter where will be explained the different stages of participation and the ways of communication.

2.7. IAIA Best Practice for Public Participation

The purpose of IAIA Best Practices focused on Public Participation is to assist practitioners of IA presenting a meaningful concept of public participation and its characteristics. The participative aspect covers involving the affected people and informing them of the decision-making as well as taking into account their concerns and ideas. Upon this context, the IAIA developed, in 2006, the International Best Practices for Public Participation (André, Enserink, Connor, & Croal, 2006).

According to these best practices, the public involvement could be included in all the impact assessment processes. Public participation is composed of different levels. The first level is the inactive participation or the information distribution. The second stage involves the consultation through conversation with the people who are affected by the program or the plan. The last stage refers to the level of participation where the public is involved in the decision-making process through different events (André, Enserink, Connor, & Croal, 2006). The objectives of IAIA for Public Participation aim at a better administration of the communities. These objectives are: To promote the cooperation, evenness, and fairness through the inclusion of affected public. Informing the public about the plan's outputs, collection of the public connection with the environment, as well as their background. Also, gathering their opinions to enhance evaluation processes, decrease possible negative reactions and enhance mutual learning (André, Enserink, Connor, & Croal, 2006).

The IAIA best practices present three main layers: Basic Principles, Operating Principles and Developing Guidelines.

Basic Principles

The Basic Principles can be applied in all stages of Public Involvement from strategic to operational level (André, Enserink, Connor, & Croal, 2006):

- Adapted to context: current conditions, meaning that local community's culture and the social and economic characteristics should be taken into account and be respected.
- Informative and proactive: Information should be simplified to be understandable by all stakeholders.
- Adaptive and communicative: in order to have productive communication, the conduction should be done considering the different characteristics of the target groups.
- Inclusive and equitable: All the stakeholders even those who cannot represent their opinion should be considered; in many cases children, women and older people should be concerned and give them the opportunity to express their ideas. Considering not only the present equity but also in the future time the sustainability can be achieved.
- Educative: contribute to mutual respect and understanding.
- Cooperative: promote the sustainable development aiming to achieve acceptance even if there are conflicting interests.
- Imputable: make people aware of the decision making and how their voice was heard during to the process. (André, Enserink, Connor, & Croal, 2006)

Operating Principles

The Operating Principles are regarded as the implementation guide of the Basic Principles in all stages of the processes.

- Initiated early and sustained: Involvement should start early enough before the decisions have already been made. This will improve the analysis and the scoping phase as well as there will be more chances to adopt public's input.
- Well planned and focused on negotiable issues: All the involved people should be aware of the whole process and its characteristics, goals and potential results. The process should take into account the different interests, therefore should be focused in the negotiation stage for the decision making.
- Supportive to participants: Supporting the public may mean financial help and capacity development, especially to communities in which the concept of public participation is not common.

- Tiered and optimized: The stakeholder's participation should be involved in the proper level of the plan or program in order to optimize the resources (mostly time) from everyone involved. (André, Enserink, Connor, & Croal, 2006)
- Open and transparent: Transparency and inclusion play a significant role in public participation. All the people should be taken into account without making exceptions regarding their citizenship status, gender and socio-economic level amongst other aspects.
- Context-oriented: Many communities have their own regulations and rules regarding the public involvement. In this case, the approach to the public should be done with respect to their norms and values in order to increase the quality of the outcome.
- Credible and rigorous: Impartially and professionally conducted. The participation of a neutral facilitator who may ensure and promote the transparency of the information distribution and the ethical conduction.

Developing Guidelines

The Developing Guidelines have been created to improve the results of the public involvement. These are related to "next-level" principles and are focused on: The information distribution (access and usefulness of the information) high level and creative ways of involvement as well as access to justice. (André, Enserink, Connor, & Croal, 2006)

3. Research Question

Being a Greek citizen I have experienced the lack of public participation in many and different aspects regarding the decision-making process in Greece. The idea of being invited into different meetings where citizens can co-decide or even express their ideas either with private developers or administrative bodies is not common. For this reason, my aim as researcher is to study the public participation in Greece, the legislation which is in force as well as what recommendations I could give through my assessment of other legislations, international as well as national. Through this research a different reality could be revealed and probably the adaptation of small changes in the beginning by Greek legislation could lead into deep transitions for the process of public participation and the way of citizens feel about that. Consequently, the below research question and sub-questions are developed and are answered through this thesis.

Research Question:

“How inclusive and effective is public participation process in projects of Renewable Energy Resources in Greece?”

Sub-questions:

- **How inclusive is public participation process in Greece compared to Danish process? (Can the Greek legislation adapt elements by Danish legislation regarding EIA and public participation)**
- **Should there be different and special approach of public inclusion in regards to Greek context compared to Danish?**

4. Methodology

The scope of this chapter is to give an analytical overview of the selected methods that used in the development of this report. The accurate selected methodology is a prerequisite in order to gather the demanded data for a more reliable and valid development of analysis and discussion which has a result the precise response in the research question and sub-questions. The selected methods are characterized as qualitative since are composed by literature review and interviews.

The methodology can be identified in two different categories; qualitative and quantitative, based on the way the data are collected (Denzin & Lincoln, 2000). For the development of this report, the selected methods belong in the qualitative category and include literature review and interviews. Qualitative research method emphasizes mostly on the quality of the gathered information. The aim of this method is to answer questions focusing on the meaning and explanation of the data in order to describe a phenomenon. Even if the amount of the gathered data is rather small, it shows sensitivity on the assessed research field and is sufficient way to give in-depth input and description (Denzin & Lincoln, 2000).

On the other hand, the Quantitative research method is focusing on the numeric result of research. The specific method is used mostly in cases where numbers and statistics are demanded to analyze a hypothesis (Quinn, 2002).

In the below graph are illustrated different characteristics of qualitative methodology (Burrell & Morgan, 1979).

Qualitative Methods
Words
Point of View of Participants
Theory Emergent
Researcher Close
Process
Unstructured
Contextual Understanding
Rich deep data
Micro
Meaning
Natural Settings

Table 6: Characteristics of Qualitative Methods. (Burrell & Morgan, 1979)

The qualitative methods are several and differentiate according to the way of data collection (Saunders, 2009):

- Focus group
- Observations
- Qualitative Interview
- Document Analysis

4.1. Literature Review

Literature review or document analysis is a type of methodology which assists the author in gathering data related to an assessed phenomenon with detailed information. The data from literature review, usually are easily accessible although the reliability and quality may vary. In order to avoid the possible use of unreliable data which may have a negative impact on the validity of the assessed report, the author needs to be really conscious and careful in the selection. There are several types of documents such as (Petticrew & Roberts, 2006):

- Personal documents
- Official state documents
- Company documents
- Media outputs
- Virtual documents

In order to minimize the lack of reliability and validity in the gathered data and consequently to the final conclusion, the literature review is limited in official legislation and regulation as well as in articles derived from the search machine Primo which is provided by the digital library of Aalborg University to all students. The data from literature review is explained thoroughly in the chapter of Problem Analysis with the intention to use them as the basis for the development of analysis and discussion chapters. The gathered data correspond to different types of documents. Mostly can be characterized as official state documents (legislations and regulations), and to virtual documents (articles).

The selected legislations and regulations are EU Directive for EIA, Aarhus Convention, IAIA Best Practices, Greek Legislation for EIA and Danish Legislation for EIA. Since the purpose of the report is the analysis of the effectiveness of public participation in EIA in Greece and to provide recommendations for improvement the use of the specific legislations are identified as the most relevant which can take place as milestones in the comparison for the evaluation. In order to be more specific is essential to explain the choice of those particular legislations. Of course, the assessment of Greek legislation for EIA's and the process of public participation within it is the most important and meaningful scope as is the objective of this report. Since Greece is participant member of EU it means that needs to integrate the Directive in the national legislation, for this reason, EU Directive is used as an element in the

development of evaluation. In the same motive, Aarhus Convention is chosen, as Greece is again one of the participant countries who has signed it. In the literature review is included also Danish legislation as it is used as another input for comparison with Greek legislation and assess if there are any elements and best practices of the process of Public participation in the same context which can be adopted by Greece. Finally, IAIA Best Practices are included in the literature review as there are many information and advice on how the public participation as a concept can be improved. The best practices are used as well as to give more concrete and reliable recommendations for improvement in the Greek context.

4.2. Interviews

The qualitative Interview method can be characterized as structured, semi-structured and unstructured. Selecting this type of method, the interviewer can address the concerned topics letting the interview to take a different form. For this research, the interviews can be described as semi-structured. Furthermore, for each interview individually were developed interview guides in order to facilitate the flow of the process and maintain the coherence. The interview guide included different questions according to the interviewee and his specialization. In case of having only one interview guide for all the different interviews, there probably would be a lack of reliability. All the interview guides are enclosed in the **Annex**. However, by definition, the purpose of the guide is to help the interviewer select the intended information for the development of the report, although gives the ability to evolve the dialogue with the interviewee. It is essential to underline that the interviewee, his mood, and willingness plays important role in the interview. In cases that the interviewee is more available and more committed to the interview, can turn into a more interesting and fruitful process with probably even more data.

Four interviews were conducted in total, three of them in Greece and one in Denmark, Copenhagen. Since the selected theme to be assessed is focused on Greece and the public participation in EIA's in renewable energy projects the first interviews were conducted in Greece. In order to sustain the reliability of the data it was regarded more appropriate to conduct the interviews in person and not in other ways such as via Skype or phone; sometimes through these ways (not in person), the validity can be questioned. In Greece were conducted three interviews, two of them in Athens and one of them in Larisa in the offices of Thessaly region. The selection of those specific interviews is not spontaneous. The purpose was to include different stakeholders that have knowledge on EIA's and public participation but from a different perspective. The first interviewee was Mrs. Alexandra Poravou, an environmental engineer who works in a technical company and conducts EIA's. The second interview took place in the Center of Renewable Energy Resources of Greece, with Mr. Aristotelis Botzios Mechanical Engineer with Master degree in Environmental Engineering who has worked also in the past in the private sector as well. The third and final

interview as referred above was conducted in the city of Larisa. The interviewee was Mr. Panayiotis Vouros an Environmentalist, an employee of Region of Thessaly located in the city of Larisa.

Two of the interviews, with Mr. Vouros and Mr. Botzios, were recorded in order to sustain the validity of the data up to the stage of transcription; however, Mrs. Poravou refused to record the interview and in this case, the interview was transcribed in a notebook. It is essential to highlight that all the information and data from the interviews regarding EIA's are focused on renewable energy resources projects as well as the examples which will contribute in the chapters of analysis and discussion.

In Copenhagen the interview took place in the City Hall, the interviewee was Mrs. Catrine Biering planner in Municipality of Copenhagen.

Regarding the creation of the interview guide, different aspects were taken into consideration. Of course, the assessment of public participation as a concept as well as the different inputs which are explained in the chapter of Problem Analysis is the main background for the development of the questions to be communicated. Although in order to make the questions more relevant to the idea of effectiveness the interview guide is based on a set of frame questions which are provided by (Environment, 2005)

_Who? (Questions about who is to informed during the process)

_When? (During which stages and according to what time frame the public is to be included)

_What? (Objectives that are included in the public participation)

_How? (Questions about the approach towards public and different methods for their inclusion)

_Where?(It is highly related to the above question about the approach towards public participation)

-Why? (For what reason public participation is needed what goal this serves) (Environment, 2005)

4.3. Reflection on Methodology and delimitation

The literature review before the conduction of interviews played a key role in the development of the different interview guides. Having knowledge regarding the legislation of EIA's and public participation made the selection of the questions more successful and accurate.

The interviews in Greece were conducted in the Greek language as it is author's native language as well. The recorded interviews were re-listened and transcribed according to the selected design to make them more comprehensive. The data was translated from Greeks to English by the author as result there is no language barrier or translation by other means which may be not reliable.

As for the interview in Denmark, was conducted in English, therefore there was no doubt regarding the coherence and meaning of data.

Regarding the literature review, the different chapters describing the legislation and provisions in Greece were translated from Greek to English by the author, responsibly and taken into consideration to not alter the meaning.

The information in chapters about Danish legislation was written already in English without putting in danger the meaning in terms of translation; although it would be better to have more information in English. For instance, the Danish legislation has been changed lately but it was not feasible to find the new legislation in English paper. For this reason, the use of the older legislation was regarded more reliable.

Regarding the selection of literature review, is used a number of legislation and regulations. However, for a comprehensive management of all the input, the selection was conducted having as a benchmark the Greek legislation. Consequently, are chosen legislations which are related to this project's object.

5. Theories

In this chapter are included the two different forms of theories which are used in the development of the project. Social theory is represented by Ladder of participation developed by Sherry Arnstein (Arnstein, 1969) providing the different levels of participation which can be achieved as well as methods supporting the attempt for each one of them. For the better conduction and development of research design of the report, the four different types of effectiveness developed by (Chanchitpricha & Bond, 2013) support the research. Below there is a descriptive presentation of the both elements.

5.1. Conceptualizing Effectiveness

Since there is a lack of specific evaluation framework which can be used to evaluate the effectiveness of public participation in EIA's in Greece, it is selected a different approach to achieve this goal. The different types of effectiveness developed by Chanchitpricha in the attempt to conceptualizing effectiveness are used later in the chapters of analysis (Chanchitpricha & Bond, 2013).

The aim of this chapter is to give an overview of the concept of effectiveness as well as which kind of criteria and categories are able to contribute to the evaluation of the effectiveness of public participation in EIA. In this chapter is presented a framework constituted by different criteria and categories that can be used later on in the chapter of analysis as a base in the development of filters which will be used in order to answer the research question regarding the effectiveness of public participation in EIA's in Greece.

The concept of effectiveness and its core meaning has been an object of discussion among the different authors. Below are presented some of the definitions:

“...effectiveness is a matter of contribution that institutions make to solving the problems that motivate the actors to invest the time and energy needed to create them...”(Young & MA, 1999)

“...how well something works or whether it works as intended and meets the purpose of which it is designed” (Wimbush & Watson, 2000)

Generally, the factors that characterize the definition of effectiveness are: the process of assessment, the required resources, additionally the purpose of the assessment, the interest of decision makers, the concerned stakeholders, the expectation from involved stakeholders and the changes coming from knowledge gaining. Summing up it is clear that the effectiveness depends on the context and the participation of stakeholders. In order to conceptualize the effectiveness, the development of different categories is essential in order to comprehend the different factors. The four categories are: **procedural, substantive, transactive and normative** (Chanchitpricha & Bond, 2013).

Procedural Effectiveness: How the Environmental Assessment complies with the principles and established provisions.

Substantive Effectiveness: Referred on what extent the set aim can be achieved.

Transactive Effectiveness: The extent that the environmental assessment has achieved the desired outcome with the minimum resources, referred to financial resources, minimum time available.

Normative Effectiveness: It is related to the principles that characterize a community. Among those principles are included the culture, philosophy, and science; factors that can affect the intended goal of the environmental assessment (Chanchitpricha & Bond, 2013).

Criteria of Procedural Effectiveness

- A factor that can influence highly the procedural effectiveness in environmental assessments is the legal framework; a set of legal compliance which can be principles and policies that embrace an effective process and the quality of environmental assessment.
- Availability of economic resources is another important key factor in the development of an environmental assessment. The provided funds are related to the quality of the assessment. However, the financial management of the available economic budget belongs in the transactive effectiveness and depends on the developer's judgment (Chanchitpricha & Bond, 2013).
- Public participation and engagement of concerned stakeholders are regarded as a mechanism which can affect the procedural effectiveness. Subsequently, terms such

as transparency and fairness in public meetings are regarded as essential in the development of environmental assessment policy. The gained knowledge from the interactions with interested stakeholders can assist in the better perception of the environmental assessment process and contribute in potential positive changes and improvements (Chanchitpricha & Bond, 2013).

Criteria of Substantive Effectiveness

- A key factor in substantive effectiveness is regarded the existence of legal framework. The concept of legal framework can be also considered as a criterion of procedural effectiveness, meaning the regulations of how and what should be included in the environmental assessment. However, the specific factor can also be part of substantive effectiveness as the legal framework can also identify the authorities and the roles of decision makers.
- The decision making context is another criterion which can affect the effectiveness of this form. Although in terms of EIA the decision-making context it is rather difficult to address, as the mechanisms for EIA are various.
- Stakeholder engagement and their input can affect the final decision and the whole process of EIA. An accurate and comprehensible environmental report is able to facilitate the practitioners to observe different elements which should take into consideration (Chanchitpricha & Bond, 2013).

Criteria of Transactive Effectiveness

- Criteria of this category are regarded the economic budget, the time, the general resources and specification of roles. The aim is to use all the provided resources and the time at the minimum level and the same time to achieve a proficient level of effectiveness (Chanchitpricha & Bond, 2013).

Criteria of Normative Effectiveness

- As criteria that define the normative effectiveness can be claimed all those elements and perceptions that can motivate the public and interested stakeholders to participate in EIA process, express their ideas and finally learn from all this procedure in order to be more experienced with the idea of EIA. Through this way it is also promoted the sustainable development. Criteria of this category are culture, science, policy, and practice are those factors to affect the effectiveness (Chanchitpricha & Bond, 2013).

The filters which are derived from the above types of effectiveness are explained explicitly in the chapter of analysis. The presentation of all the types and criteria included in each of them give the opportunity for the reader to realize accurately in the analysis chapter how the above were used in the development of the filters and consequently support the

purpose of the report which analyzes the effectiveness of public participation in EIA's in Greece.

5.2. Ladder of Participation Sherry Arnstein

This chapter's purpose is to explain the idea behind the different stages of public participation as well as the possible mechanisms that planners, developers, and practitioners can use in order to promote public inclusion. However, this chapter's elements are used later on in the development of recommendations for improvement of public participation in EIA's in Greece. Consequently, the explicit explanation is a prerequisite.

According to Arnstein, the public participation can be presented in different levels. In order to explain this idea, she developed a set of specific levels which no one is enough sufficient to stand alone but they all are interlinked and the lowest one is a prerequisite to moving to the upper level. The levels from the lowest to the highest are: Manipulation, which is not regarded as public participation, Information Dissemination, Consultation, Collaboration and Partnership and the highest level Empowerment and Delegated Power (Arnstein, 1969). Information Dissemination is regarded as the lowest of the levels which actually characterized by public participation, however, is the basis in order to escalate the public inclusion to upper levels. This means that information dissemination is a prerequisite to move further to consultation, and again consultation a prerequisite to move to collaboration and partnership and the same until the achievement of the highest level of empowerment and delegated power (Arnstein, 1969).

In the following graph are presented the different levels of participation and their characteristics (Kornov, Thrane, Remmen, & Lund, 2007).

Levels of Participation	Characteristics
Manipulation	Implies no intention of real participation while the decision has already been made by the power holders. The objective is to manipulate citizens to agree with the system.
Information Dissemination	Implies that citizens receive information. The information is controlled by the authorities and there is no feedback process. Information Dissemination is basic step for increased participation.
Consultation	Implies that there is feedback between the community and authorities and that decisions are not already made. Citizens can express their ideas.
Collaboration and Partnership	Implies that the role of citizens is increased and authorities act more as facilitators than providers. There is a joint process of analysis and decision making.
Empowerment and Delegated Power	Implies that control is passed to community and authorities enter into initiatives when it is asked by community.

Table 7: Levels of participations and characteristics, (Kornov, Thrane, Remmen, & Lund, 2007)

Contexts on which public participation can be applied and play an important role can vary significantly. Such contexts may be policies and planning. Public participation consequently can vary as well and a key role on the decided desired level is the judgment of the responsible authorities or planners. In some cases, the required level of participation can be regarded only the information dissemination while other times only information dissemination is not enough sufficient and the public inclusion requires another approach such as collaboration and partnership.

However, there are provided different methods which can be applied for the fulfillment of each level of public participation and are presented in the graph below (Kornov, Thrane, Remmen, & Lund, 2007).

Levels of Participation	Methods
Manipulation	<i>No Methods</i>
Information Dissemination	<ul style="list-style-type: none"> • Brochures and Leafleting • Unstaffed displays • Staffed displays • Public hearings • Public Meetings • Internet (Games, 3Dmodels, e.t.c.)
Consultation	<ul style="list-style-type: none"> • Staffed displays • Questionnaires/Surveys • Public hearings-Public Meetings • Behavioral Mapping • Workshops • Citizens groups • Internet (Contact formula, Internet Voting, Chat forum, e.t.c.)
Collaboration and Partnership	<ul style="list-style-type: none"> • Workshops • Citizens groups • Competitions • Internet Voting • Advisory Panels • Delegation of Money
Empower and Delegated Power	<ul style="list-style-type: none"> • Delegation of Money • Competitions • Internet Voting

Table 8: Levels of participation and methods, (Kornov, Thrane, Remmen, & Lund, 2007)

6. Research Framework

The aim of this chapter is to give a thorough overview of the research framework of the report to the reader. The purpose is to facilitate a general understanding of the different steps and stages which were taken and lead to the final conclusions of the report answering the defined research question as well as the sub-questions.

The research framework is an illustration of the research objective of the assessed project and the steps of the procedure which were followed in order to analyze and give recommendations on the defined problem.

Generally speaking, it is essential to refer that the research design can be applied for researches which assess many and different kinds of concepts. As soon as the objective has been identified the development of the research design is the next step for the accomplishment of the research purpose. In the specific report, the research object is the current state of public participation in EIA's in Greece which specializes in projects of renewable energy resources.

Since the research objective has been identified, the review of the literature and the possible inclusion of empirical data such as interviews are regarded as the preliminary study which can help the researcher to identify the criteria and the form of the evaluation of the research object. In order to give recommendations for the improvement of the effectiveness of public participation in EIA's in Greece, a critical evaluation of the current legislation of EIA's in Greece and the present practices of public participation in this context needs to be assessed. For this reason, there is developed a specific number of criteria in order to facilitate the assessment of the defined object. The group of these criteria constitutes the research perspective of this framework and encloses different information which allows the researcher to continue on an objective and in-depth confrontation between the research object and the research perspective. The result of this confrontation is the desired target which is to provide recommendations for improvement of public participation in EIA's in Greece.

Of course, the development and selection of criteria is an essential and time-consuming procedure which defines significantly on how the research is built as well as the character of the evaluation of the research object. The assessment criteria or research perspective is the result of the thorough assessment of literature review and empirical data. However, for the specific evaluation of public participation, a different form is presented. But firstly an explanation of the selected literature review is needed. The literature review and the selected documents used for the evaluation are mostly different legislations and best practices as well as supported by empirical data derived from conducted interviews; at this point is significant to highlight that the obtained knowledge from the predominant research in literature review guided the selection of the interviewees and the purpose of the interviews. Since Greece is participant country of European Union, all the regulations, and

legislations regarding environmental issues provided by the EU affect directly or indirectly the national legislation of the country. For this reason, the assessment of EU Directive regarding EIA's was the first input of literature review in this research. Secondly, the Aarhus Convention is another component for the development of Criteria as Greece is one of the European countries who has signed it and is a member. Moreover, since one of the defined sub- questions is referred in the Danish legislation and the good practices that Greece could be influenced by for the improvement of its own national legislation; the assessment of the Danish legislative context regarding EIA is also included in the documents of the literature review. Additionally, best practices for public participation developed by IAIA is the last regulative oriented input for the building of research perspective.

Regarding the identification of criteria, a different perspective is used. Since there is identified a specific research object and according to legislation there is a lack of evaluation framework this report approaches the concept of evaluation by the confrontation of all the different included legislations with the current legislation and state of public participation in EIA's in Greece. To facilitate the process of the approach some filters or indicators which correspond to different types of effectiveness are identified. According to the character of each filter, the data coming from each legislation and best practices used in the chapter of Problem Analysis are categorized respectively. On that way, the information of the different legislation and regulations become more comprehensible and can act as criteria more effectively under the spectrum of different nature of categories.

However, the same factors are used also for the Greek legislation as well as the data coming from interviews. The purpose of that action is to have all the data, those used as criteria and those who are under evaluation in the same form. This approach can eliminate possible misunderstandings or mistakes later on giving recommendations for evaluation. This development provides the advantage to control more efficiently all the elements that are needed to be used.

To put it more simple for the reader below is presented a graph which illustrates all the different steps which were followed for the development of the research design of this project.

Furthermore, for the better interpretation of the findings after the confrontation and for the improvement of proposals another component is used, the one of social theory and specifically The Ladder of Participation by Sherry Arnstein. Information by social theory though is not put into categories as all the other components rather than used only at the last stage as referred above in order to make the findings more reliable.

Below is presented a graph which illustrates the different stages of research design.

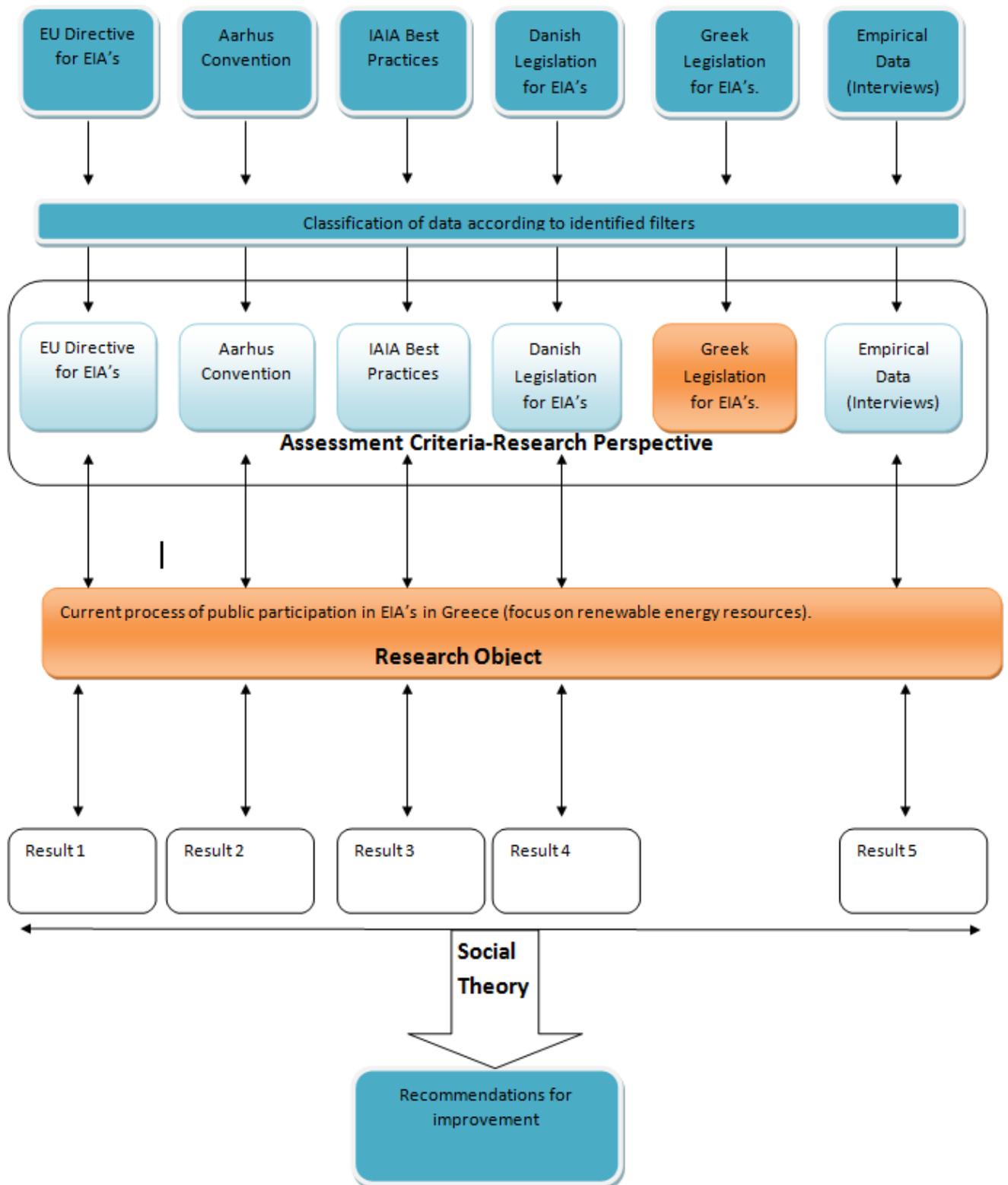


Table 9: Research framework, Authors' interpretation

7. Analysis

As explained in previous chapters, the purpose of this project is to assess the effectiveness of public participation in EIA's in Greece focused on renewable energy projects. The assessment of the effectiveness is elaborated quantitatively through the analysis of Greek legislation for this concept and the comparison with other legislations and regulations. The chapter of analysis is divided into two parts. As indicated the process in the chapter of Research Framework, in the first part of the analysis are included the identification of filters which are used for the classification of all the data coming from different legislations, best practices, and interviews. The identified filters derived from the four types of effectiveness developed by Chanchitpricha (Chanchitpricha & Bond, 2013). In the first part takes place the management of all the data into different boards corresponding to different filters, so it can be visible for the reader to comprehend the rationality behind it. The boards also make the whole process more transparent and reliable minimizing the danger of overlook significant information. In the second chapter of analysis are presented the confrontations between the classified data of Greek legislation with the data of all the other inputs.

7.1. Analysis 1st Part

7.1.1. Identification of filters and types of effectiveness on which correspond

The aim of this chapter is to give explicit answers to questions such as which filters are identified? According to what base? Can these filters guarantee that meet characteristics of effectiveness? Answering the first question, these filters are identified according to various criteria of the four different types of effectiveness developed by Chanchitpricha (Chanchitpricha & Bond, 2013) and presented thoroughly in the previous chapter. The filters used are primarily either criteria themselves of effectiveness or filters inspired by the criteria. The set of filters consists of nine different elements: Objective of Public Participation, Legal Framework of Public Participation, Economic resources provided for Public Participation, Alternatives, Provided timing schedule for Public Participation, Transparency, Stakeholders Identification, Feedback, Approach for Public Participation.

Explaining the whole set of filters one by one according to the type of effectiveness on which correspond, it may give a more accurate overview of the significance and reliability that the selected filters can provide in order to answer to defined research question and sub-questions.

Filters and types of effectiveness

When it comes to the explanation of the selected filters and the types of effectiveness on which correspond a detailed explanation is needed since as can be seen by the above graph some of the filters correspond on more than one of the four types of effectiveness (Chanchitpricha & Bond, 2013).

Objective of Public Participation: Procedural effectiveness is chosen to be the most representative type of the specific filter. By definition which is explained in the chapter above, procedural effectiveness includes all the parameters which promote the compliance with principles for public participation. The presence of objective of public participation can embrace and ensure the approach and significance of public participation (Chanchitpricha & Bond, 2013).

Legal Framework for Public Participation: The specific filter is already referred as a criterion which meets the requirements of the Procedural and simultaneously Substantive type of effectiveness (Chanchitpricha & Bond, 2013).

Economic Resources provided for Public Participation: Corresponds to two different types of effectiveness, Procedural and Transactive. The Economic budget for public participation according to procedural effectiveness increases the quality of the whole EIA although may correspond also to Transactive type since the management of economic budget depends on the developer (Chanchitpricha & Bond, 2013).

Alternatives: The provided alternatives is a filter which is not referred as an accurate criterion in different types of effectiveness, however the literature review for this report leads to the selection of the specific filter as it is regarded quite significant. Attempting to classify the filter on the type of effectiveness, the transactive type is identified as more precise. Additionally, it is recognized that procedural effectiveness could also fit the specific filter In the procedural type is included as a criterion the public participation and the comments that public can provide and help the developers in decision making. The given opportunity for the public to select different alternatives solutions may have as result the better understanding of the assessed project for the developers (Chanchitpricha & Bond, 2013).

Timing Schedule for Public Participation: The provided timing periods for public participation and consultation is referred as resources. According to the transactive type of effectiveness, the aim is the best and most proficient level of public participation with the minimum use of all the provided resources, in which timing is included (Chanchitpricha & Bond, 2013).

Transparency of Public Participation process: A transparent and open process of public participation from the level of stakeholder identification to decision-making level is another selected filter which is regarded highly significant for an effective public participation. The

filter of transparency corresponds to the procedural type of effectiveness. As referred above by definition this type promotes the legal compliance with principles. Transparency is an element which can provide more reliability in the attempt for a more legal and effective public participation (Chanchitpricha & Bond, 2013).

Stakeholders Identification and Engagement: The mechanisms and process of identification of concerned stakeholders as well as their participation in decision making is another filter which is used for the better classification of data. This filter corresponds precisely in procedural and substantive effectiveness. The specific filter is already included as a criterion for both types of effectiveness. For the both types, public participation and stakeholder engagement can provide fruitful feedback which should be taken into consideration and help developers (Chanchitpricha & Bond, 2013).

Feedback: Feedback to the public regarding their concerns as well as how the decision is affected by them is another filter which is used for the best analysis of effectiveness. Feedback corresponds to three different types of effectiveness, Substantive, Normative and Procedural. The normative effectiveness is selected as the mechanisms for feedback can be defined and selected depending on the local culture of stakeholders as well as different norms which exist in the area of research. The procedural and substantive types of effectiveness are selected due to their criteria which are referred on public participation. Since the use of ideas and concerns of the public is mentioned as really important, their feedback is another element which can be used as a filter (Chanchitpricha & Bond, 2013).

Approach of Public Participation: The selection of types of effectiveness on which the approach of public participation correspond is made in the same motive as for Feedback and Stakeholders Identification filters. Since Public participation functions as criteria for both Procedural and Substantive types, the approach also seems to fit accurately in these two types. The normative type of effectiveness is selected as the approach for public participation may vary between areas and communities according to the local norms. For this reason, the approach of public participation and its effectiveness should take into consideration also these elements (Chanchitpricha & Bond, 2013).

Below is presented a table including all of the above data.

Filters	Explanation	Type of effectiveness
1) Objective of Public Participation	Specific definition of the character that the objective of public participation should have.	<ul style="list-style-type: none"> • Procedural
2) Legal Framework for Public Participation	A descriptive framework on how the public participation should be developed according. Either binding or consulting content.	<ul style="list-style-type: none"> • Procedural • Substantive
3) Economic Resources Provided for Public Participation	Economic resources provided by national and regional economic budget for public participation.	<ul style="list-style-type: none"> • Procedural • Transactive
4) Alternatives	Alternative solutions provided in EIA for public consultation.	<ul style="list-style-type: none"> • Procedural
5) Timing Schedule for Public Participation	Timing periods provided in different stages of EIA for public participation and consultation.	<ul style="list-style-type: none"> • Transactive
6) Transparency	Mechanisms which ensure transparency through the whole procedure of public participation and decision making.	<ul style="list-style-type: none"> • Procedural
7) Stakeholders Identification & Engagement	Mechanisms for the selection of concerned public and stakeholders for public participation.	<ul style="list-style-type: none"> • Substantive
8) Feedback	The approach and content of feedback provided to the engaged stakeholders and public involved.	<ul style="list-style-type: none"> • Normative • Substantive • Procedural
9) Approach for Public Participation	Mechanisms for promotion and participation of public participation.	<ul style="list-style-type: none"> • Normative • Procedural • Substantive

Table 10: Filters & Types of effectiveness on which correspond, (Chanchitpricha & Bond, 2013)

7.2. Data Classification

In the boards below are presented the data coming from EU Directive, Aarhus Convention, IAIA Best Practices, Greek Legislation for EIA, Danish Legislation and the inputs coming from the conducted interviews. The data are classified according to the defined filters presented in the previous chapter. Since there is a lack of evaluation framework the filters are used as guides in order to approach more effectively the Evaluation of Public Participation in EIA's in Greece and give recommendations for improvement. In the boards where the data coming from interviews are presented is added one more row in the end besides the other filters including the interviewee's ideas and proposals for improvement of public participation and in general EIA's in their country.

EU Directive	
Objective of PP in EIA's	Environmental protection and assessment of potential negative impacts of projects
Legal Framework of PP	Provides a legislative framework of EIA and minimum requirements of PP which all the participant countries need to address.
Economic Resources for PP	Not provided
Alternatives	According to Article 5 the EU Directive proposes that the public should be informed for the alternative solutions and why the developer choose a specific one for assessment.
Timing Schedule for PP	The Member States should provide an accurate timing schedule for public consultation and participation as well as period for expression of concerns. These should take place before decision making.
Transparency	Public should be informed through media <ul style="list-style-type: none"> • Information and consent of project • Explanation of time schedule for consultation • Responsible authorities on which can express concerns and questions
Stakeholders Identification &Engagement	Member States need to identify the concerned public.
Feedback	<ul style="list-style-type: none"> • The concerned public should be informed of possible decisions before decision making.
Approach for PP	Member States needs to identify the ways of approach.

Table 11: Classified data from EU Directive, Author's interpretation

Aarhus Convention	
Objective of PP	Access to information-Public participation in decision making-access to justice in environmental Matters.
Legal Framework of PP	Not provided
Economic Resources for PP	Not provided
Alternatives	Not Provided
Timing Schedule for PP	Not provided
Transparency	Access to environmental Information
Stakeholders Identification &Engagement	Public authorities (national, regional) are the one who identify the concerned public. As concerned public is regarded the people who are affected by the decision making.
Feedback	Not provided
Approach for PP	Public Participation should take place by any Party at appropriate stage

Table 12: Classified data by Aarhus Convention, Author's interpretation

Danish Legislation	
Objective of PP	EIA is regarded a holistic oriented method which promotes the public participation in decision making process.
Legal Framework of PP	Is provided an explicit framework for public consultation with different stages of public participation.
Economic Resources for PP	Not provided
Alternatives	Developer and public have dialogue for different ideas.
Timing Schedule for PP	<ul style="list-style-type: none"> • First round of consultation after screening. Time period 2-4 weeks. • Second round of consultation after the publication of EIA. Time period 8 weeks.
Transparency	All the information is published. After the final decision are provided 4 weeks for public to make comments.
Stakeholders Identification &Engagement	No information about stakeholder identification.
Feedback	After the first round of consultation the concerns and ideas are taken into account.
Approach for PP	During the first round of consultation there is a dialogue with public and developer.

Table 13: Classified data by Danish Legislation, Author's interpretation

IAIA Best Practices	
Objective of PP	Promote cooperation evenness and fairness through the inclusion of public.
Legal Framework of PP	Not provided
Economic Resources for PP	<u>Supportive to participants:</u> Financial help to communities which are not familiar with public participation
Alternatives	Not provided
Timing Schedule for PP	<ul style="list-style-type: none"> • Public participation should initiate early enough before decision making. • Participation should be involved in proper level to optimize resources for everyone involved.
Transparency	<p>Public participations should be:</p> <ul style="list-style-type: none"> • <u>Open</u>, all people should be taken into consideration without exceptions(gender, status) • <u>Credible and rigorous</u>, all people should be aware of the characteristics of process as well as another neutral facilitator could ensure the transparency.
Stakeholders Identification &Engagement	Not provided
Feedback	People should be aware of the decision as well as how their ideas are taken into consideration.
Approach for PP	<p>The public participation should be:</p> <ul style="list-style-type: none"> • Adaptive and communicative • Inclusive and equitable • Educative and cooperative

Table 14: Classified data by IAIA Best Practices, Author's interpretation

Greek Legislation	
Objective of PP	Ensure assessment of possible negative impacts by the development of projects before the decision making.
Legal Framework of PP	Is provided explicit framework for the process of public participation which is also based on EU Directive.
Economic Resources for PP	The cost of Public Participation is borne by developer.
Alternatives	Not provided
Timing Schedule for PP	After publication of EIA are provided 45 days and 35 for expression of concerns for projects of category A1 and A2 respectively.
Transparency	The competent authority is informed about public's concern before the decision making. The EIA report is published in newspaper and the site of competent authority. Public can express concerns either electronically or written.
Stakeholders Identification &Engagement	By legislation concerned public is regarded the public which is affected or may be affected by the decision making of a specific project. In the concerned public can also be regarded the NGO's.
Feedback	Not provided
Approach for PP	<ul style="list-style-type: none"> • The EIA needs to be published in national or regional newspaper to inform public. Public can express concerns written or electronically. • Besides the publication which is a requirement is up to the developer to decide the process of consultation. • In the publication information that needs to be included are the dates for consultation, dates that public can submit concerns, responsible authority for the project, location and characteristics of the project.

Table 15: Classified data by Greek Legislation, Author's interpretation

Interview with Alexandra Poravou, Environmental Engineer- Technical Company	
Objective of PP	Not provided
Legal Framework of PP	It is required the publication of EIA report and the public has available around 30 days to be informed. The developer is responsible for the public participation.
Economic Resources for PP	<i>"If the Municipalities had more economic benefits could use it for better public participation."</i>
Alternatives	Not provided
Timing Schedule for PP	<i>"Approximately 30 days are provided for consultation. It is not enough time for consultation, only those who are really interested can get informed"</i>
Transparency	<i>"Since the EIA is approved by the Municipality, people should trust them since they have voted them. Usually the concerns and reactions come from people with lower education"</i>
Stakeholders Identification &Engagement	<i>"It is Municipality's or Region's matter the public participation"</i>
Feedback	Not provided
Approach for PP	<i>"Only the publication of EIA report in newspaper and in the site of Municipality or region. If there is negative atmosphere (public negative against the project) then there is more intense participation"</i>

Table 16: Classified data by interview with Alexandra Poravou, (Poravou, 2017)

Interview with Mr. Vouros-Region of Thessaly	
Objective of PP	Not Provided
Legal Framework of PP	As provided by national legislation
Economic Resources for PP	The developer is responsible for the economic budget of the consultation.
Alternatives	The provided alternative can be called zero which is interpreted as consequences without any project and consequences with the proposed project.
Timing Schedule for PP	Timing schedule of PP as provided by legislation
Transparency	<i>"The EIA report is published in newspaper as well as all the concerned people can be present in the regional council"</i>
Stakeholders Identification &Engagement	Not provided
Feedback	<i>"The competent authority is responsible and obliged to take into consideration all the complaints and concerns regarding the project. The regional council on which is taken the final decision is open for the concerned public who is willing to be present during the decision making... however the final decision is not taken by regional council their decision is not binding"</i> <i>"There is no individual feedback to all the complaints only the final decision can be announced... after that the public which disagree can continue with indictment"</i>
Approach for PP	<i>"The approaches for public participation is the publication in newspaper and in site of region and whoever is interested and read it can express their concerns written or electronically"</i>
Suggestions	<ul style="list-style-type: none"> • <i>"The developers of the projects should promote public consultation but with the right way and early enough before the decision making"</i> • <i>" The administrative construction which is responsible for the approval of EIA needs to gets simplify in order to simplify also the legislation because right now is really confusing"</i> • <i>...the legislation regarding EIA's has been changed many times which makes the employees job in region who check the EIA's difficult, probably there should be some seminars to keep the employees update for the changes and how they should approach the EIA's as a whole..."</i>

Table 17: Classified data by interview with Panayotis Vouros, (Vouros, 2017)

Interview Aristotelis Botzios- Center of Renewable Energy Resources of Greece	
Objective of PP	Not provided
Legal Framework of PP	The developer follows the requirements by legislation.
Economic Resources for PP	Not provided
Alternatives	<i>"There are alternatives in EIA only to explain the reason why the developer decides to choose and assess the specific one."</i>
Timing Schedule for PP	<i>"The regional council needs to upload electronically in their site the summary of EIA report as well as the developer is responsible to publish it in newspaper before the decision making."</i>
Transparency	<i>"If there are many complaints by the public the regional council may invite the concerned public and the developer of the project in order to give answers in a council." "In case the public is really negative the project cannot proceed there will be courts which will delay the project or even stop it"</i>
Stakeholders Identification &Engagement	<i>"...you need to have the local community by your side to continue the project otherwise you cannot continue..." I have participated in the development of an EIA for biogas unit and the local community didn't trust the developer and for that reason they protested as a consequence the project ceased"</i>
Feedback	<i>"Feedback is given only in cases that the complaints are too many and the regional council invites developers and public in a meeting. Then the public gets feedback as at the regional council takes place a voting regarding the project"</i>
Approach for PP	The legislation refers that the developer may inform and consult the public but it doesn't make it requirement" <i>"In bigger projects it needs a better consultation since it affects more people" "... Personally always consult my customers to continue in public participation... if the case goes to court because of complaints the project will not continue..."</i>
Suggestions	<ul style="list-style-type: none"> • <i>"Generally speaking the quality of EIA's the last years has been improved...lack of monitoring is the biggest problem in EIA's in Greece"</i> • <i>"The better and earlier public participation may avoid potential complaints or even delay of the project."</i> • <i>"Projects should be developed by local communities in order also to avoid political games"</i>

Table 18: Classified data by interview with Aristotelis Botzios, (Botzios, 2017)

Interview with Catrine Biering- Municipality of Copenhagen	
Objective of PP	Not Provided
Legal Framework of PP	There is a specific legislation for the process of public participation. The hearings are a requirement.
Economic Resources for PP	The Municipality is responsible for the public participation the economic expenses for hearing etc. are covered by municipality.
Alternatives	There is always a zero alternative that is assessed in order to support the proposed project.
Timing Schedule for PP	<ul style="list-style-type: none"> • After the first approval of the project the first round of consultation begins with duration 4-6 weeks. • After the conduction of EIA report there is another round of consultation duration 8 weeks.
Transparency	Not Provided
Stakeholders Identification &Engagement	<ul style="list-style-type: none"> • During the public consultation period the municipality contacts also the local councils from different neighborhoods of Copenhagen. <i>“Especially if the project affects a specific neighborhood the contact is important as they can provide information that the developers don’t know for the area”</i> • The stakeholders’ identification depends on the project but usually we have a meeting with them to explain the facts about the projects in order to avoid misunderstandings. • The neighbors of the project get more information but all the citizens can be informed. Everything is available electronically. • In smaller projects usually there are not big meetings but there are meetings with the local neighborhood council.
Feedback	<ul style="list-style-type: none"> • After the first round of consultation there are provided feedback to citizens. The municipality tries to answer in each one of the comments although usually many questions and concerns are the same. • After second meeting all the comments are gathered in another book (WHITEBOOK) and are sent again to the council which makes the final decision. If the answer by the council is positive the people get feedback regarding the final decision
Approach for PP	<ul style="list-style-type: none"> • In the beginning there are provided flyers in cafes, big poster in central spots in town such as libraries and public buildings. Additionally information for the first round of consultation is published electronically. • Afterwards there is organized a first hearing where people can express ideas and questions. All the ideas are collected in a book “WHITEBOOK” which is send to the council and politicians of Copenhagen which is responsible for the approval of the project. • People can express their concerns in the first round of consultation through the website of municipality. There is a specific page where all the citizens can express their ideas regarding the projects. Every time there is a new project all the associations are informed such as cyclists and people with disabilities. • In the second round of consultation is organized a bigger meeting. Usually local media and newspapers cover the meeting.
Suggestions for Improvements	<ul style="list-style-type: none"> • In general the process of Public participation is quite good. A possibility for improvement is to send personal emails to citizens informing them for the public hearing.

Table 19: Classified data by interview with Catrine Biering (Biering, 2017)

7.3. Analysis 2nd Part

In the previous part of Analysis were explained the different filters as well as the types of effectiveness which correspond. Additionally, the developed boards with the classified data can give a better understanding of the different gathered data. In this part of the analysis is presented the comparison or confrontation between the Greek legislation and all the other inputs in order to give recommendations for the improvement of public participation in EIA's in Greece.

The first confrontation is the comparison of Greek legislation and EU Directive in terms of the defined filters.

Result 1: Confrontation of EU Directive –Greek Legislation

In terms of Objective of Public Participation in EIA's both Greek legislation and EU Directive provide almost the same definition which focuses more on the definition of the EIA role and purpose. For EU Directive main objective is the protection of the environment by potential negative impacts from the development of the project, and the definition of the objective for Greek legislation is the same referring also that the assessment takes place before the decision-making process.

Regarding the legislation framework for public participation, the EU Directive sets some minimum requirements regarding the information that should be published and be available to the concerned public such as facts about the project, location, and technical characteristics, as well as information of competent authorities which are responsible for the project and the public, can submit their concerns. The minimum requirements are met in the legislation framework of Greek legislation.

As for the economic resources for public participation the EU Directive is not mentioned at all, on the other hand the Greek legislation refer that all the economic expenses for public participation need to be covered exclusively by the developer of the project, which means that the public economic budget doesn't provide any financial help on this domain.

When it comes to the alternative solutions the EU Directive in the Article 5 explains that all the alternative solutions should be available to the public. On the other hand there is no explicit reference about alternatives in Greek legislation, however, later the inputs from interviews from Greece indicate that in EIA's are used alternatives.

The EU Directive is referred for the filter of the timing of public participation that all the Member States need to establish an exact time for public participation and consultation as well as the time frame that people can express their concerns for each project. However Greek Legislation provides time schedule only for expression of public concerns. For projects

of category A1, the time period where the people can express their ideas is 45 since the day the EIA report is published and 35 days for projects which belong in category A2.

Regarding the filter of Transparency, EU Directive requires from all the participant Members to make available to the public through media information such as the development of the project, explanation of time frame for public participation as well as the competent authorities on which the concerned stakeholders can ask information regarding the project. In these terms, Greek legislation meet all the requirements since is asked by the developer of the project to publish all these information in the newspaper as well as the competent authority publish it on their website. Although as mentioned before the time frame which is provided is about the period of time that public can express concern. There is not required by Greek legislation a specific timeframe for participation. The public participation is up to the developer and his judgment.

Regarding the Identification of Stakeholders for engagement, the EU Directive requires by the Members to identify them, Greek legislation defines the concerned public as the people who are affected or may be affected by the decision making regarding the development of a specific project.

EU Directive suggests that the possible decisions if are available should be available for the public before decision making. However, in Greek legislation is not mentioned in terms of feedback. There is a lack of information in legislation regarding the specific filter.

As for the approaches of Public Participation, EU Directive lets this decision on each Member State to define it. In Greece, there is no specific approach on public participation. In Greek Legislation is only proposed to developers to include public in decision making but without doing it a binding requirement.

Result 2: Confrontation of Greek legislation and Aarhus Convention

Since this confrontation takes place between a Convention and a participant country of it the comparison is presented only by the filters that Aarhus Convention can give information which are: objective, transparency, Stakeholders Identification and Engagement and Approach of Public Participation. Regarding the objective, the Aarhus Convention promotes the public participation in decision-making instead of Greek legislation which doesn't give an explicit objective for Public participation. Aarhus Convention and Greek legislation agree on the Identification of Stakeholders as the people affected by the decision making. Regarding transparency, Aarhus Convention highlights the access to environmental information. Greek legislation also ensures that people can be informed about details regarding the developed project by the publication of EIA report. As for the approaches for public participation, the Convention promotes it but doesn't define on which stages it should take place. For Greek legislation, the public participation is limited to the levels of information dissemination and only if the concerned public is interested can ask for more details and explanations.

Result 3: Confrontation of Greek legislation with IAIA Best Practices

According to IAIA, there should be provided economic help for public participation to communities which are not familiar with the concept, on the contrary in Greece it is not provided. Regarding the timeframe of participation according to IAIA should start early enough, although in Greece there is only information dissemination before the decision making. Regarding the identification of stakeholders and approach of participation, all citizens should be included and the authority should make sure of that. In the case of Greece, the competent authority ensures only that the information can be visible by citizens without any further control if they are indeed informed or at least the most affected by the decision-making stakeholders. Best Practices suggests that participation should have different characteristics such as being educative and cooperative, however by the assessment of Greek legislation the only characteristic of the approach is informative without interaction at participatory level.

Result 4: Confrontation of Greek Legislation and Danish Legislation supported by interview with Municipality of Copenhagen

The objective, as well as the legal framework of Public Participation in Danish Legislation, is more accurate than in Greek. The legal framework consists of different specific stages of public participation which are regarded binding and need to be followed. On the contrary in Greek legislation, there is a lack of stages of public participation. Regarding the economic resources, the competent authority is responsible for all the expenses of public participation instead in Greece the competent authority doesn't provide economic assistance. Regarding the timing schedule and mechanisms for participation in Denmark, it consists of two different rounds where public hearings, information dissemination through media flyers and posters take place. While in Greece are not required consultations rather than make available information in the newspaper and the internet. The identification of stakeholders depends on the project. Usually, all the citizens are informed but mostly the neighbors who are affected more. Regarding the feedback in Denmark, people get individual answers electronically in their concerns. The alternatives also are discussed with developers and public in the first round of consultations. Regarding the transparency, the two legislations are similar as all the information is available electronically.

Result 5: Confrontation of Greek Legislation with Interviews conducted in Greece

The gathered information coming from interviews, in many of the filters are the same as the those provided by legislation. For instance, there is no specific objective of public participation in EIA's. According to the most interviewees, the economic budget for participation concerns only the developer which coincides also with the legislation, although

Mrs. Poravou indicated that the Municipality is responsible for the citizen's update regarding information for projects: *"It is Municipality's or Region's matter the public participation"* (Poravou, 2017). During the review of Greek legislation regarding alternative solutions there is no reference on the specific subject, however through the interviews it reveals that there is inclusion of alternative solution although it has the form of alternative zero which means that there is comparison between the implications of the proposed plan and those by no development of any project *"The provided alternative can be called zero which is interpreted as consequences without any project and consequences with the proposed project"* (Vouros, 2017). Regarding the concept of transparency, the most of the interviewee's answers are that the legislation as for public participation is followed accordingly as well as that the all the data regarding the planned projects are available to the citizens as it is required to be published information. However, Mrs. Poravou states that people should trust municipality's or region's decision regarding the decision making: *"Since the EIA is approved by the Municipality, people should trust them since they have voted them. Usually the concerns and reactions come from people with lower education"* (Poravou, 2017) Additionally Mr. Vouros from Region of Thessaly states that people who disagree with the proposed project can participate in the council of the region: *"The EIA report is published in newspaper as well as all the concerned people can be present in the regional council"* (Vouros, 2017). Mr. Botzio's statement regarding transparency agrees and supports the statement by Mr. Vouros: *"If there are many complaints by the public the regional council may invite the concerned public and the developer of the project in order to give answers in a council"*. As for the feedback regarding the decision-making as well as in form of answers to different concerns, the legislation doesn't provide any practices on how the competent authorities should handle it. However, the interviews with Mr. Botzios and Mr. Vouros present another approach on this concept. Both of them state that the people who are really concerned may be present to the regional council where the first consent is taken regarding the approval of the project: *"Feedback is given only in cases that the complaints are too many and the regional council invites developers and public in a meeting. Then the public gets feedback as at the regional council takes place a voting regarding the project"* (Botzios, 2017). Additionally Mr. Vouros highlight that there is a lack of individual feedback to citizens: *"There is no individual feedback to all the complaints only the final decision can be announced... after that, the public which disagrees can continue with indictment"* (Vouros, 2017). Regarding the different approaches for public participation, all the interviewees state that mostly is followed only the required stages by legislation which are the information dissemination regarding details of the project both via newspapers and electronically through the competent authority's website. *"The approaches for public participation is the publication in newspaper and in site of region and whoever is interested and read it can express their concerns written or electronically"* (Vouros, 2017). Although it is stated by Mrs. Poravou that if there are many negative reactions against the project it may lead to public participation with more than informative character *"Only the publication of EIA report in newspaper and in the site of Municipality or region. If there is negative*

atmosphere (public negative against the project) then there is more intense participation” (Poravou, 2017). Additionally Mr. Botzios advises his customers to include public especially in projects of bigger size “The legislation refers that the developer may inform and consult the public but it doesn’t make it requirement” “...in bigger projects it needs a better consultation since it affects more people” “... Personally always consult my customers to continue in public participation... if the case goes to court because of complaints the project will not continue...” (Botzios, 2017). In terms of identification of stakeholders Greek legislation has given a definition for the concerned public, however by the interviews is not explicitly explained how the developer identify the public to participate. Mrs. Poravou believes that the Municipality is the one who is responsible for the public participation, consequently, it has the role in identifying the public to be informed. On the other hand, Mr. Botzios states that the participation of the local community nearby the project is needed: “...you need to have the local community by your side to continue the project otherwise you cannot continue...”. ...” I have participated in the development of an EIA for biogas unit and the local community didn’t trust the developer and for that reason, they protested with consequence the surcease of the project ” (Botzios, 2017). When it comes to timing period for public participation Mrs. Poravou regards that the approximately provided 30 days is not enough period for public inclusion and only those who are really interested can be informed (Poravou, 2017). The other two interviewees referred only to the timing periods required by legislation which are addressed only to give to people the opportunity to submit their concerns without requiring by the competent authority or developers specific stages and actions towards public inclusion.

Summing up the chapter of analysis and its sub-chapters, the data classified according to filters which represent different types of effectiveness lead to a more understandable and reliable confrontation between Greek legislation with the selected legislations, best practices, and interviews. The results from these confrontations create the content for the discussion chapter where are explained all the strengths and weaknesses of public participation in EIA’s in Greece regarding its effectiveness. Additionally, through this design, the defined research question and sub-questions will be answered giving also recommendations for improvement.

8. Discussion

The aim of this chapter is to present the recommendations for improvement of public participation in EIA's in Greece. Along with the recommendations are discussed the weak points that are observed during the analysis chapters and make the public participation less efficient. The discussion is developed according to the different filters that are identified in this report. The efficiency is evaluated qualitatively taking into consideration the confrontations presented in the chapter of analysis. Additionally, the social theory of Sherry Arnstein supports the providing recommendations. Also, the recommendations provided are influenced by the Danish legislation answering in the sub-question on which elements regarding public participation Greece could adopt by Denmark.

The analysis chapter reveals some weaknesses regarding the effectiveness of public participation in EIA's in Greece. In terms of defined objective of public participation in EIA's, it is not provided a specific definition, the used definition is only regarding the scope of EIA as is presented also by EU Directive but without making a specific refer on public participation. From all the assessed literature only in Danish legislation can be found a more explicit connection and promotion of public participation in EIA's. Importing a more detailed objective about public participation in the national legislation, Greece could be a step closer to a more effective public participation, since its meaning and significance may be visible by all the developers, planners as well as the engineers who conduct the EIA's and facilitate the approach in including people.

Regarding a legal framework for public participation, for another time Greek legislation follows and integrates the required demands by EU Directive which however reach the level of establishing requirements for information dissemination of the project's details as well the establishment of the chronological period for submission of concerns. The Danish legislation once again has a more integrated legal framework where are addressed also the process of public participation and the periods for consultations and not only for information dissemination. According to the ladder of participation, the information dissemination is an important level towards participation as is the base on which a more inclusive participation can be developed (Arnstein, 1969). This also is highly related with the filter of timing for public participation as well as the approaches for the same purpose. All these filters are faced by Greek legislation only by information dissemination aspect without setting any demands for public consultation neither by the developers nor the competent authorities. What is demanded by Greek legislation for the developers is to make the information available to people and to give them some period of time to ask questions. The ways that are asked to make available the information are clearly some of the methods that can be used for information dissemination (Kornov, Thrane, Remmen, & Lund, 2007). In this case, Greece could use as a paradigm the approach of Denmark, where the demanded period for consultation is really used to approach people and communicate with them rather than

waiting for their ideas in case they want to approach the authorities. Denmark is obviously higher on the ladder of participation since there is also consultation, but also feedback is given back even individually which may put it even higher on the ladder at the level of collaboration. Of course, the legislation in Greece is quite different than the Danish. The biggest difference is that in Denmark the competent authority is the body responsible for the public participation and the stages are really well defined and descriptive. In Greece, the responsible body for the public inclusion is only the developer and additionally, the legislation doesn't provide clear steps for public participation, as result leaving to the developer the freedom to not proceed into consultation or stakeholders engagement. Probably the second recommendation after the need for a definition for the objective for public participation in EIA's is that the Greek legislation should be more binding about the stages regarding inclusion. In case the developer continues being the responsible body, the country should make sure that the regulations and demands are followed. Of course, the two countries are different with different cultures and these should be taken into consideration. For instance, in Denmark, many of the information dissemination as well as the dialogue occurs through the internet. In Greece probably is not the best solution since the people, in general, are not used in the concept of public participation and its characteristics. For this reason, other ways of approach could be used. Methods which can assist to move further up the ladder of participation are public hearings and meetings where the direct contact with citizens may help the developers to explain their ideas as well as make the citizens feel that their presence and voice are quite important in the development of a project. Additionally, questionnaires and surveys are another method by which the developer can identify their concerns and ideas as well as ask them information about the location of the assessed project and advantages and disadvantages that the citizens of the area may know better (Kornov, Thrane, Remmen, & Lund, 2007). Flyers, posters and of course media which already are used may facilitate the attempt to raise awareness regarding the project and make the stakeholders more willing to engage.

All the above of course lead to another really significant filter of effectiveness which is the economic resources provided for public participation. The best practices by IAIA also suggest that financial help is needed especially to citizens which are not familiar with public participation (André, Enserink, Connor, & Croal, 2006). Economic resources are also provided in the Danish case, although in the case of Greece is a really controversial and difficult to define a filter to assess. Greece is being through an economic crisis the last years which means that rearrange the national economic resources providing assistance for public participation may not be an easy to address the concept. Although from the interviews as well is referred as an aspect that could change a lot the way that public participation is approached but is also highlighted the importance of Municipality's benefit by the developed plan *"If the Municipalities had more economic benefits could use it for better public participation."* (Poravou, 2017). This report doesn't provide economic solutions consequently the approach of the filter of economic resources and the recommendations

about that are not economically accurate. In case the competent authorities cannot provide financial help then the legislation needs to be more binding for the developers of the project and make them dispose a bigger economic budget on public participation by demanding precise stages and ways to achieve them for public participation. Stages that could be included are inspired also by the Danish legislation. There should be defined at least public hearings sponsored by the developers in different stages of the process of EIA. Aarhus Convention, whose member is also Greece, proposes that the public participation should start early enough which means that as soon as the project has passed the screening stage the developer should arrange a first meeting where a dialogue can take part along with other ways of communication which are referred above. As soon as the EIA report is released another meeting is necessary because the available information at this stage is more integrated and the citizen's opinion really can help the developer in one hand getting feedback and reactions by the people who know better the area and on the other hand the people need to get informed for the evolution of a project which might affect them significantly.

When it comes to the feedbacks in Greek legislation there is a gap since only the people who arrive at the stage to complain and are willing to participate in the regional council can take feedback and see from close how their voice was heard (Vouros, 2017). In Denmark, all the concerns are gathered in books the both rounds of consultation and each time is presented to the council which is responsible for the decision making. In Denmark those comments are gathered mostly through the website of the competent authority and feedback is given to the citizens individually (Biering, 2017). In case of Greece since there are not included approaches for public participation people express their concerns when they are really affected by the project (Poravou, 2017). in order to change that after establishing binding stages of participation another binding regulation should be the way the developer answer to the comments. This could occur either through the public hearings where the developer himself can answer questions or by the already established way where people can write down their comments on a form provided by the authorities. The authorities, in this case, are the one who plays a key role. In the form that citizens need to fill in order to submit comments or require some verifications should provide their email or any other contact such as telephone number or address and the authority should responsibly answer to their questions ensuring that the feedback is received accordingly.

Regarding the alternative solutions in Greek legislation, there is no worthwhile or descriptive explanation on what should be addressed. Although by the conducted interviews with experts in Greece it is clear that the zero alternatives are used in order to justify the proposed project. The same type of alternative is also used in Denmark as well (Biering, 2017). Although in Denmark the project is presented really early to citizens which may give them the margin to talk about that before the EIA report. In the case of Greece, the people can get information regarding the project only after the development of the EIA report which may don't give them the opportunity to talk about other alternatives. The alternative

solutions and their presentation to citizens are highly connected with the approach of public participation and how early it starts. The recommendation regarding the filter of alternative is to present in general the project really early even before the EIA development when the people can still interfere and probably propose a solution which the developer hasn't even think (Kornov, Thrane, Remmen, & Lund, 2007).

Transparency is another filter where recommendations can be provided. Greece may have many improvements to make towards a higher level of effective public participation rather than information dissemination although it is essential to refer that is trying to keep the whole process transparent. By law is a requirement to make available all the information of the project to citizens before decision making and also the regional council is open to citizens who want to be present during the first verification of the project. Additionally, in case the project gets the final licensing but the citizens are irritated and against it, they have the ability to resort to justice and sometimes they can even cease the development (Botzios, 2017). However, there are some elements that could embrace the transparency and are explained above, such as the inclusion of people early enough, informing them regularly and in many stages, giving feedback to their concerns as well as take into consideration their ideas in the development of the project.

Finally, the identification of Stakeholders is another difficult to address filter such as there are not enough information that could be applied to all projects. The definition from Greek legislation identifies as stakeholders all the citizens who are affected or may be affected by the decision making (Republic, Specialisation of the process regarding inform public and participation of the interested public during the public consultations for environmental licensing of projects in category A , 2014). Danish legislation, as well as the other regulations, don't define the stakeholders, although by the interview with the municipality of Copenhagen is regarded that all the citizens are defined as stakeholders to be informed but more intense participation is provided to the neighbors of the project (Biering, 2017). The same concept could also be adapted in Greek legislation, keeping the established definition but also by giving some guidelines to the developers who are responsible for public participation to focus more on the most affected citizens by the development of the project which means those who reside close to the project. Of course, this is not the most accurate recommendation but the projects of EIA can vary significantly and this makes the identification even more difficult. Probably the size of the project plays a role on which are the stakeholders to be involved, for instance, if the project is a park of wind turbines the affected people may be more than a small biogas plant in a rural area.

Summarizing the above information, it is quite clear that Greece has a lot to do in order to improve the public participation and increase its effectiveness. By the assessment of the regulations that is embedded to it cannot be denied that follows the minimum requirements. Although the national legislation has a lot of room for improvement. The public participation is focused on information dissemination and keeping the transparency

at the level where everyone can be informed if they are willing to. However, in order to increase the efficiency, there must be changes in the legislation which make the public inclusion more binding. Since the developer is the body responsible for information dissemination there must be asked more stages of inclusion consisting of public hearings, meetings supported by different methods of approach. Many aspects of Danish process could be adopted but bearing in mind that the culture and the economy are quite different.

9. Conclusion

Since neither the Greek nor the international legislation provides an evaluation framework according to which the effectiveness of public participation in EIA's focused on renewable energy projects can be assessed, the approach towards the evaluation of the Greek case developed by the comparison between the Greek legislation with different other regulations. In order to make the confrontation and to provide recommendations for improvement, the analysis is elaborated according to different types of effectiveness (Chanchitpricha & Bond, 2013). The four different types of effectiveness and their criteria function as a basis from where different filters are derived. The filters which represent different types of effectiveness are used for the classification of data as well as the categories which are used for the assessment of effectiveness. The identified filters are: Objective of Public Participation, Legal Framework of Public Participation, Timing Schedule for Public Participation, Alternatives, Approach for Public Participation, Identification of Stakeholders, Economic resources provided for public participation, Feedback and Transparency of the process of public participation. In the development of the project are included also different interviews with experts both in Denmark and in Greece which support the data to be assessed in order to provide recommendations. After the classification of the data, the confrontations between the Greek legislation with all the other input give a better overview of the level of effectiveness as well as the weak points of effectiveness on which the recommendations are addressed.

According to the ladder of participation (Arnstein, 1969) public participation in EIA's in Greece after the assessment is identified as limited at the level of information dissemination. In Greek legislation are not required any stages of pragmatic public participation rather than make available in media the information about the project only after the development of the EIA report. Which means that even the information dissemination takes place after the project is approved for EIA and not before. In Greek case, the developer plays the most important role and it is up to his judgment if and how the public is to be approached. Even in this case, there are no advice and directions by authorities on how the approach should be addressed. Additionally, the developer is responsible for the economic budget for public participation, the national financial budget

doesn't provide any economic assistance for that. Of course, the economic state of Greece is a barrier towards the availability of funds. However, even in this case, the legislation should require more stages of public participation from the developer in order to make more effective the public inclusion and lift it up to a higher level of the ladder such as consultation and later on collaboration and partnership. The recommendations are provided having as an example the process of public participation in Denmark, where two rounds of consultations are required as well as the delivery of feedback to stakeholders. The developer in Greece needs to update the stakeholders early enough before the EIA report as the feedback that he can get is very important for the better conduction of the assessment. Regarding the feedback given to stakeholders, the use of the internet is not suggested in Greece since it is not that popular although there are other ways to replace it. In case the number of highly affected stakeholders is manageable personal mails can be sent explaining and answering the potential questions. Additionally, the adoption of a specific objective of public participation by the legislation is needed as without it the idea of public inclusion and its position in EIA's, in general, is vague and its significance cannot be perceived by the developers as well as the people working this domain. Regarding the approaches for public inclusion are provided methods which can lead to the next level of the ladder which is consultation. Since every step is a prerequisite for the next one is regarded as a better solution to make small steps towards improvement. In order to achieve the level of consultation, public hearings and meetings, as well as questionnaires and surveys, can play a key role in order to approach a public which in the case of Greece is not that familiar with participation in decision making. The Internet can be used as it is already used by competent authorities uploading the information regarding the project as well as there is a form that people can submit their comments. However, it is suggested that those comments should be transferred to the developer in order to give feedback to citizens. Regarding the filter of transparency, Greece is quite effective since all information is available before the decision-making level as Aarhus Convention and EU Directive require, as well as all the citizens, can participate in the region's council where is provided the first approval for the continuance of the project.

Concluding, it is recommended that the national legislation regarding public participation needs to be readjusted in order to make it more effective. In case the competent authorities cannot play a more important role in this domain, the legislation needs to establish more binding and explicit stages for public participation that the developer is required to conduct. Taking into consideration that Greek citizens are not a familiar population with public participation maybe the drastic changes are not the most effective decision. Making smaller changes into the approach of public participation such as direct dialogue in many different stages of the process, the public can get aware of how this procedure functions and its characteristics. Climbing higher in the ladder of participation is a time-consuming process as none of the intermediate levels can be overlooked.

Annex

Interview Guide Alexandra Poravou

1. Is provided by legislation the objective of public participation?
2. Can you describe the stages of EIA where public participation is included?
3. How do you identify the public to be informed? Does it depend on the size of the project?
4. What kind of information do you give to the public? Does it depend on the stage of participation?
5. How does the public share with you or the developer you are working with their concerns?
6. Do you give feedback to the public answering their questions?
7. Do you provide alternative solutions? If yes in which stages, you share them with the public?
8. Is it provided economic budget by the developer for the inclusion of public participation?
9. What are your suggestions regarding improvement for public participation?

Interview Guide Panayotis Vouros

1. Is provided by legislation the objective of public participation?
2. Can you describe the stages of EIA where public participation is included?
3. Is it asked by the developers guides from you on how to identify the stakeholders to participate?
4. What kind of information do you think the public should get? Does it depend on the stage of participation?
5. How does the public share with you their concerns?
6. How do you as authority answer to concerns?
7. Do you give feedback to the public answering their questions?
8. Are there provided alternative solutions? If yes in which stages, they should be shared with the public?
9. Is it provided economic budget by the local authorities for the inclusion of public participation?
10. What are your suggestions regarding improvement for public participation?

Interview Guide Aristotelis Botzios

1. Is provided by legislation the objective of public participation?
2. Can you describe the stages of EIA where public participation is included?
3. How do you identify the public to be informed? Does it depend on the size of the project?
4. What kind of information do you give to the public? Does it depend on the stage of participation?
5. How does the public share with you or the developer you are working with their concerns?
6. Do you give feedback to the public answering their questions?
7. Do you provide alternative solutions? If yes in which stages, you share them with the public?
8. Is it provided economic budget by the developer for the inclusion of public participation?
9. What are your suggestions regarding improvement for public participation?

Interview Guide Catrine Biering

1. Is provided by legislation the objective of public participation?
2. Can you describe the stages of EIA where public participation is included?
3. How do you identify the public to be informed? Does it depend on the size of the project?

4. What kind of information do you give to the public? Does it depend on the stage of participation?
5. How does the public share with you or the developer you are working with their concerns?
6. Do you give feedback to the public answering their questions? If yes in which ways?
7. Do you provide alternative solutions? If yes in which stages, you share them with the public?
8. Is it provided economic budget by the authorities for the inclusion of public participation?
9. What are your suggestions regarding improvement for public participation?

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