

ENVIRONMENTAL DEMOCRACY VIA ICT: PUBLIC PARTICIPATION VIA ICT TOWARDS A SUSTAINABLE ENVIRONMENT

Evika Karamagioli¹, Jiří Hřebíček², Rudolf Legat³,
Katharina Schleidt³, Eirini Souri⁴

Abstract

Good governance, within national and international level, is essential for good state policy implementation. Transparency and public participation have emerged as tools in order to enhance democracy and consequently to lead in a good governance. The same applies in all areas of political interest, such as in the environmental policy area, which simultaneously is one of the most sensitive areas in contemporary politics.

In the European Union (EU), environmental policy appears under siege and there are doubts as to the effectiveness of the existing environmental “acquis” which seem to suggest that policy-making in this field is not efficient enough in order to overcome or at least cope with the effects of environmental degradation.

Since the adoption of the Rio Declaration (1992) the concept of access to information and public participation (Principle 10) is rapidly entering international environmental decision-making. By promoting transparency and public participation in the environmental policy-making processes the EU witnesses an evolution in environmental policy; namely it’s “constitutionalization”, a fluid constellation of “leaders and laggards”, and trends to supersede supranational versus intergovernmental conflict lines-opening ways to substantial and procedural innovation. The effort for transparency has established new theoretical concepts, such as “environmental governance” and “environmental democracy” in eDemocracy/eEnvironment. Concurrently with the rapid technological boom, professionals have come across new technological tools that could be used in this attempt of modernizing and democratizing policy-making processes. Information Communication Technology (ICT), and particularly Internet are seen under this spectrum as tools that could promote efficiently the enhancement of “good governance” at eEnvironment.

The paper deals firstly with the new concept of “environmental democracy” in eDemocracy/eEnvironment. Secondly it deals with the utilization of ICT tools in decision-making processes and specifically in the environmental policy area and the Shared Environmental Information System- SEIS.

¹ Gov2u, Anavriton 20, Marousi 15124, Athens, Greece, e-mail: evika@gov2u.org, web: <http://www.gov2u.org>

² Institute of Biostatistics and Analyses, Masaryk University, Kamenice 126/3, 625 00 Brno, Czech Republic, e-mail: hrebicek@iba.muni.cz, web: <http://www.iba.muni.cz>

³ Umweltbundesamt GmbH, Spittelauer Lände 5, 1090 Wien, Austria, e-mail: rudolf.legat@umweltbundesamt.at,

katharina.schleidt@umweltbundesamt.at, web: <http://www.umweltbundesamt.at>

⁴ Gov2u, Anavriton 20, Marousi 15124, Athens, Greece, e-mail: evika@gov2u.org, web: <http://www.gov2u.org>

1. Introduction

As stated above the terms “*environmental democracy*” and “*environmental governance*” are relatively new and they are now taking hold. Specifically the term “*environmental democracy*” reflects increasing recognition that environmental issues must be addressed by all those affected by their outcome, not just by governments and industrial sectors. It captures the principle of equal rights for all those in the environmental debate - including the public, community groups, advocates, industrial leaders, workers, governments, academics and health care professionals [12]. Access to environmental information for all who choose to participate in the environmental decision-making process, is integral to the concept of environmental democracy.

The policy of the *Right-to-Know*, now nearly a decade old, provides the foundation, and advocates providing basic information to the public. Informed with basic facts about the quality of their environment, citizens can become active participants in identifying and resolving issues at both local and national levels [12]. Environmental democracy is about government being transparent, accountable, and involving people in decisions that affect their environment [17]. What the term means is the rules, processes and behaviours that affect the way powers are exercised in the field of environmental policies [3]. Having a look at the example of the EU; the European Commission stated that “*EU citizens should soon be enjoying legally guaranteed rights to access environmental information held by public authorities⁴, to participate in environmental decision-making and to take violations of environmental law to court. This will represent a milestone in strengthening democracy in environmental policy-making and environmental protection, and improve the effectiveness of environmental policies.*” [9].

As one can understand “*environmental democracy*”, even if there is no solid definition of the term, indicates the opportunity and necessity to participate in environmental decision-making and the responsibility of the governments and citizens to understand and assess the meaning of the environmental information fully specified in Directives: 2003/4/EC “*Public Access to Environmental Information*”. Understanding the key interactions, such as participation and access to environmental data, information and services, becomes more sophisticated with time as well as it becomes an effective tool in empowering communities and citizens’ groups to approach, question and challenge governmental and industrial decisions on environmental quality. This new approach boosts the democratic ties in the policy making as well as the democratic institutions themselves, creating what we came to know as “*environmental democracy*”.

In the paper, it is discussed that public participation in environmental decision-making has indeed become a major democratization-tool in contemporary politics; and we seek to indicate this new approach on governance in environmental policy area using the example of the EU. We examine if the ICT tools can be applicable to sensitive European policy areas such as the environment and if they are applicable; whether they contribute to “*environmental democracy*” at the framework of eDemocracy.

⁴Such entities are broadly defined as: (a) government or other public administration, including public advisory bodies, at national, regional or local level; (b) any natural or legal person performing public administrative functions under national law, including specific duties, activities or services in relation to the environment; and (c) any natural or legal person having public responsibilities or functions, or providing public services, relating to the environment under the control of a body or person falling within (a) or (b). (European Commission, Consultancy Report on Progress on the EU Sustainable Development Strategy, 2008)

2. ICT tools and its role as a tool in policy-making areas

The newly-emerged discussion on concepts of government and the notion of “*good governance*” has drastically changed the focus of political agents and made a shift of interest regarding new methods of improvement of the efficiency of political procedures. What is more is that democratic accountability is perceived as a methodological instrument towards meeting those ends. Interestingly democratic accountability as a concept involves largely notions of other terms that came recently to the surface of the political-discussion. These terms are: e.g. *openness*; *transparency*; and *citizens’ participation*. What is suggested by specialists is that those concepts when applied in democratic processes, they would improve democratic accountability and this way “*good governance*” could be ensured. Taken as a whole, the idea that occurs from these configurations is of an increasing trust on adopting ICT tools and incorporating them into political processes such as policy-making areas. In this section we are going to examine this new alignment and see closely the paradigm of ICT tools development in promoting accountability in policy-making areas, using the example of the EU.

2.1. ICT tools as means of the democratization of the decision-making processes in the EU

The image of citizens’ participation in Europe over the past decades has been drawn with the most dreadful colours. Public participation in democratic processes has been declining and the reasons behind this are mainly owed to the mistrust of citizens in policymakers and governmental efficiency itself. Means of information accessibility are on demand by the public, something that officials were failing to do largely till recently because of the lack of efficient mechanisms that would involve people in decision-making processes.

ICT tools came to the picture as an “*answer*” to this obstacle for the officials, as it can have beneficiary possibilities when properly used opening up new channels of participation in the decision-making processes as well as making all these procedures more transparent to the public eye, shifting some of the political power to the citizens, giving them the opportunity to influence governance. It’s more apparent now than ever to EU officials that effective information provision through ICT tools can be the key to effective public engagement allowing politicians to make more informed decisions, while developing social and political responsibility.

However let’s not allow ourselves to see this change through rose-coloured glasses. Still the vision of modernization of the political procedures at the European level is not progressing as expected and the today results are not yet sufficient according to the European Commission’s perspective, see COM, 2006/173 final “*i2010 eGovernment Action Plan: Accelerating eGovernment in Europe for the Benefit of All*”. Of course that does not mean that there is no hope, the Commission actively supports further research on the use of ICT in the legislative decision-making processes, something that is definitely promising, as well as the fact that this is seen as a remedy for building trust and understanding in the democratic process and encouraging citizens to start re-engaging with political affairs. In reality it is indeed only recently that there has been sufficient practical design and application of ICT in support of democracy in the EU to enable this “*potential*” to be considered within real-world context [27]. One major outcome of these attempts is the genesis of the concept of eDemocracy

specified in *Recommendation CM/Rec(2009)1 of the Committee of Ministers of the Council of Europe to member states on electronic democracy (e-Democracy)*⁵ adopted by the Committee of Ministers on 18 February 2009 at the 1049th meeting of the Ministers' Deputies.

2.2. eDemocracy

The term *eDemocracy* captures both the intent to support democracy and the study outcomes and context. eDemocracy has been defined as: “concerned with the use of ICT to engage citizens, support the democratic decision-making processes and strengthen representative democracy. The principal ICT mechanism is the internet, accessed through an increasing variety of channels including PCs both at home and in public locations, mobile phones, and interactive digital TV. The democratic decision-making processes can be divided into two main categories: one addressing electoral process, including eVoting, and the other addressing citizen eParticipation in democratic decision-making.” eDemocracy therefore presents a tremendous opportunity for people and public authorities alike, it being understood that all stakeholders join together to harness its benefits and control its potential risks.

The four themes set out by the Council of Ministers Recommendation of eDemocracy in the *Recommendation REC(2004)15* that establishes the main goals for eDemocracy are as follow:

- strengthening the participation, initiative and engagement of citizens in national, regional and local public life;
- improving the transparency of the democratic decision-making process and the accountability of democratic institutions;
- improving the responsiveness of public authorities;
- fostering public debate and scrutiny of the decision-making process.

The political decision-making process can be expressed by the following iterative stage model, see Figure 1. This model also shows how eDemocracy applications can be applied to the different stages [13].

5

http://www.coe.int/t/dgap/democracy/Activities/GGIS/CAHDE/2009/RecCM2009_1_and_Accomp_Docs/6647-0-ID8289-Recommendation%20on%20electronic%20democracy.pdf

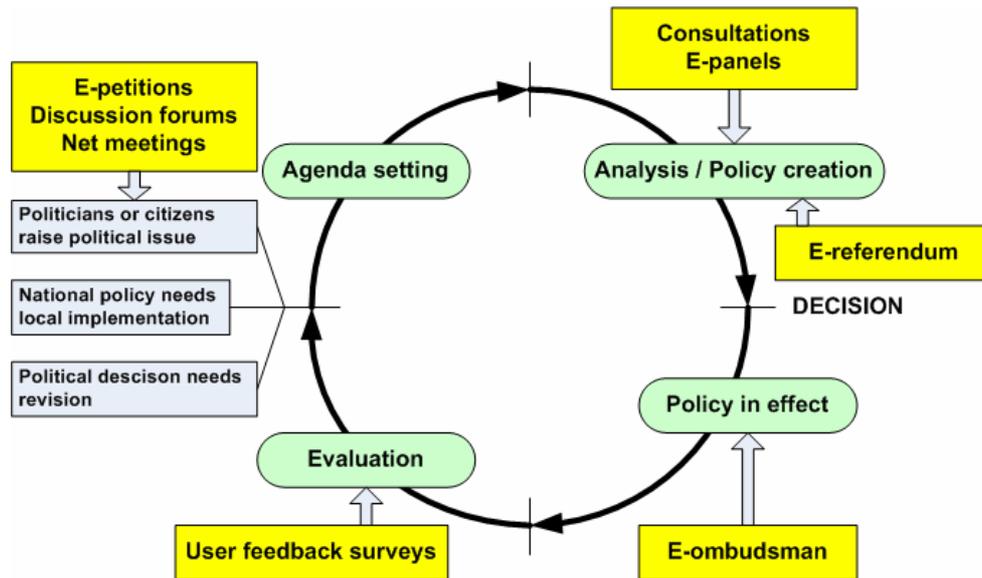


Figure 1. The model of political decision making process in eDemocracy [13]

eDemocracy strives to simplify processes between public institutions, the legislative bodies, citizens and businesses regarding exchange information, communication and transactions in many sectors using ICT tools. It simplifies bureaucracy, makes decision and law implementation more transparent and supports public participation in many ways.

Research and analysis of eDemocracy were done by the *Ad hoc Committee on eDemocracy of the Council of Europe (CAHDE)*⁶ that supported above considerations and indicates that the tools, practices and policies within the framework of eDemocracy are subject to a complex, demanding and sometimes time-consuming development and implementation process. The *Recommendation CM/Rec(2009)1* is the first international legal instrument to set standards in the field of eDemocracy.

The Recommendation was prepared by the CAHDE, (2006-2008) and was adopted on 18 February 2009 by the Committee of Ministers at the 1049th meeting of the Ministers' Deputies. It offers all European governments and other stakeholders substantial guidelines and principles when dealing with eDemocracy. It is accompanied by an *Explanatory Memorandum* and a number of practical tools⁷ prepared for those who require hands-on information about combining modern information and communication tools and democratic requirements and practice. During its mandate, CAHDE held four plenary meetings and a number of informal meetings, and organised a Symposium in Strasbourg on "*eDemocracy: new opportunities for enhancing civic participation*" (April 2007).

In addition to the *Recommendation CM/Rec(2009)1*, CAHDE developed recommendations to the Committee of Ministers on possible further action in the field of eDemocracy, in the framework of the Council of Europe's agenda on strengthening democracy and good governance. A travelling exhibition will promote the application of the Recommendation in

⁶ http://www.coe.int/t/dgap/democracy/Activities/GGIS/CAHDE/Default_en.asp

⁷ Indicative Guide No 1: Generic Tools and Policies for an electronic democracy – preliminary edition (by Robert Krimmer and Manuel J. Kripp in cooperation with Fernando Mendez), see http://www.coe.int/t/dgap/democracy/Source/EDemocracy/CAHDE_IV/PDF_CAHDE%20indicative%20guide%20no%20%201%20E.pdf

Council of Europe member States and beyond Europe. Exploratory seminars will assess the need for further work in the field of eDemocracy, in particular on regulatory issues, bottom-up e-democracy and the use of e-consultations.

The *Recommendation CM/Rec(2009)1* determines 72 principles, rules and regulatory frameworks of eDemocracy in the Appendix to Recommendation CM/Rec(2009)1. It also includes the Principle 40 of e-Democracy for eEnvironment: “*eEnvironment is the use and promotion of ICT for the purposes of environmental assessment and protection, spatial planning, and the sustainable use of natural resources, and includes public participation. Using ICT to introduce or enhance public participation can improve democratic governance in respect of environmental issues.*” This principle is specified in greater detail in the *Explanatory memorandum to Recommendation CM/Rec(2009)1 of the Committee of Ministers to member states on e-Democracy*.

The EU has embraced the idea of using eDemocracy to strengthen citizen’s participation in democratic decision making. The task of eDemocracy is to empower people with ICT to be able to act in bottom-up decision processes, to make informed decisions, and to develop social and political responsibility. Thus, eDemocracy is a means to empower the political, socio-technological and cultural capabilities of individuals giving them the possibility to involve and self-organize in the information society. eDemocracy provides citizens a greater share in political discourse and, in the ability to contribute their own ideas, suggestions, and requests, an as yet unrealized potential – that as far as it is supported and accepted – could modify the understanding of democratic participation.

A good paradigm of non EU countries’ administrations utilizing ICT tools in their attempt to democratize political processes is that of the USA Obama administration. President Obama highlighted on the 21st of January 2009 ““My Administration is committed to creating an unprecedented level of openness in government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in government.” The present USA administration has taken several steps towards those ends; on his first full day in office, President Obama signed the Memorandum on Transparency and Open Government⁸, ushering in a new era of open and accountable government meant to bridge the gap between the American people and their government. Another step was the issue of the Open Government Directive⁹ within the Open Government Initiative, instructing every government agency to open its doors and its data to the American people. Within the Open Government Initiative the Obama Administration created Data.gov¹⁰, a public website which includes searchable data catalogs providing access to data. The purpose of Data.gov is to increase public access to high value, machine readable datasets generated by the Executive Branch of the Federal Government.

As seen EU is not the only one which has envisioned a new way of re-engaging citizens in the political arena, and it is highly likely that it could lose its leading position as the US Open Government Directive includes a very tight time schedule compared to the EU’s efforts. As indicated in the EC Press Release on the 19th November, 2009 (IP/09/1738)¹¹ the EU

⁸ http://www.whitehouse.gov/omb/assets/memoranda_2010/m10-06.pdf

⁹ <http://www.whitehouse.gov/open>

¹⁰ <http://www.data.gov/>

¹¹ <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1738&format=HTML&aged=0&language=EN&guiLanguage=en>

Ministers have committed to developing smarter online public services for citizens and businesses by 2015, making eGovernment more accessible, interactive and customised. At the fifth Ministerial eGovernment Conference in Malmö (Sweden), they outlined a joint vision and policy priorities on how this should be delivered. eGovernment is a key step towards boosting Europe's competitiveness, benefiting from time and cost savings for citizens and businesses across Europe. However 2015 might be too long comparing to the USA administration goals on similar aspects.

In any case, eDemocracy applications are widely recognized as having the potential to support and facilitate participatory and deliberative democracy, enhancing the transparency and accountability of democratic decision-making, in a world were is merely characterized by a widespread public disengagement from the political life. Conversely, the design and implementation of such tools is not at all innocent; it involves a series of considerations, many of which have moral and social importance. The increasing use of leading-edge technologies, could introduce new threats to sustained growth and social inclusion. Like all technology, ICT comes as a result of a combination of tools, social practices, social organizations and cultural meanings and it's shaped by character of the society that produces them. The tools ICT offers could not simply exist without the variety of social institutions, political and economic arrangements and social bonds, which are necessary not only for their construction but also for their maintenance [10].

In general, it is obvious that eDemocracy is not meant to replace any non-digital democracy channel, nor is it the all-healing means to cure challenges to democracy. Additionally, all tools and policies address specific challenges to democracy and support certain stakeholders within the society. Public authorities and NGOs, for example, mainly drive policies regarding the use of electronic democracy. Initiatives on a very local level such as E-Neighbourhood or E-Discussions are dependent on the participation of citizens. E-Legislation and E-Citizen relationship management are tools that do not involve the single citizen directly, but have tremendous consequences for one's daily life and one's ability to participate in the democratic process. eDemocracy involves many different stakeholders and their co-operation. Public authorities, citizens, civil societies and their institutions, politicians and political institutions, the media and businesses are equally essential for establishing a living eDemocracy [10].

2.3. Implementing ICT tools in environmental policy procedures

The 6th *Environmental Action Program of the European Community (EAP) 2002-2012* highlights the importance of providing adequate environmental information and effective opportunities for public participation in environmental decision-making; in this manner increasing accountability and transparency of decision-making and contributing to public awareness and support for the decisions taken. For this reason the EAP set out the framework for environmental policy-making in the European Union for the period 2002-2012, which outlines specific actions in this dimension that need to be taken to achieve them.

The main concept behind the EU's position is that effective involvement of citizens by governments depends on their recognition of access to environmental data as a basic precondition, consultation as central to policy-making and public participation as a relationship based on partnership [16]. Democratic political participation in environmental issues on the other hand must in its turn provide the means for citizens and other stakeholders to be informed, the methods to take part in decision-making and the ability to contribute and influence the policy agenda [24]. Participation is a multilateral relationship between

stakeholders of the political triangle (state, market, civil society), each attempting to influence the political agenda at various stages of the political cycle and at different levels of government. Hence, ICT is viewed – from an EU perspective – based on what has already been said as a strategic tool for reinforcing citizen engagement through eDemocracy and eParticipation initiatives, including those related to environmental concerns.

3. Rendering of Environmental Democracy in the EU

“Empowering people to protect their environment is a cornerstone of effective policy-making. Citizens must be given the right to know how good or bad the state of the environment is and to participate in decision-making that will affect their health and quality of life. A well-informed and active public means more effective environmental legislation and better enforcement of environmental policies. Citizens will now be able to act as environmental watchdogs!” said Margot Wallström, Commissioner for the Environment in the EU [9].

3.1. EU legislation supporting environmental democracy

As mentioned earlier in our paper, the EU regulates its efforts in legally guarantying the rights of European citizens; to access environmental data held by public authorities, to participate in environmental decision-making and to take violations of environmental law to court. Undoubtedly this can only be the beginning in strengthening democracy in environmental policy-making, however there are several actions of the EU to prove that there is hope of putting European proposals to practice and act as a catalyst for important changes in the behaviour of public authorities at all levels by enabling citizens and associations to assume responsibility for the environment [9].

There is basic EU legislation that is being implemented supporting environmental democracy. Indicatively we name the following **Directives**: **2003/4/EC** “*Public Access to Environmental Information*”; **2003/35/EC** “*Providing for Public Participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC*”; **2003/98/EC** “*Re-use of Public Sector Information*”; **2007/2/EC** “*Infrastructure for Spatial Information in the European Community (INSPIRE)*” together with the **Communication** from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions **COM(2008) 46 final**: *Towards a Shared Environmental Information System (SEIS)*.

Concerning the Directive 2003/4/EC on public access to environmental information Member States were under the obligation to report by 14th of August 2009 to the EC on the experience gained in the application of the Directive. First example is that of Austria; with the amendment to the Environmental Information Act (EIA) 2004, Austria transposed Directive 2003/4/EC on Public Access to Environmental Information into national law at the federal level. In order to ensure the coordinated implementation of the required operative measures by all targeted information providing bodies, an eGovernment working group on environmental information has been set up within the framework of the platform «digital Austria» in 2007. One of the major objectives of the eGovernment working group on environmental information is the development of a central environmental information portal

(one-stop shop) which is in line with the intentions of the European Commission for a Shared Environmental Information System (SEIS)¹².

Second example is that of Germany; on the national report on the application of the Directive the German State stated that on the 22 December 2004 action regarding the implementation of the EIA both on federal and state level. On federal level EIA came into force on the 14th February 2005 and addresses the Information Agencies of the federal government. On state level the amended Directive has been implemented by the Environmental Information Provinces and it addresses the Information Agencies of both states and municipalities¹³. Last example is that of the United Kingdom, on the national report on “Experience gained in the application of the Directive 2003/04”¹⁴ UK stated that the Directive was transported into UK law on the 21st of December 2004 as the Environmental Information Regulations 2004. The Regulations came into force on the 1st of January 2005 and cover England, Wales and Northern Ireland. Regarding Scotland the Environmental Information (Scotland) Regulations 2004 were made on the 30th November 2004 and came into effect also on the 1st of January 2005. National legislation, which deals with access to non environmental information, the Freedom of Information Act 2000 and the Freedom of information (Scotland) Act 2002, also came into force on 1 January 2005.

Another major step towards those ends is the aligning legislation at EU level and in EU Member States with the provisions of the 1998 Århus Convention. Now to present, the European Commission has just adopted three legislative proposals towards full application of the Convention, launching the final step in implementing its provisions into EU law [9], [25]. Under the Convention public authorities are obliged to keep and share the environmental information relevant to their functions and to organize, make accessible and disseminate them.

Additionally, in order to guide the implementation of the Convention on electronic access and participation at national level there was a set of policy recommendations adopted by the Parties in 2005, which address four areas of eAccess to environmental information: (1) general policy, (2) priority categories of information, (3) institutional development and capacity-building, and (4) the clearing-house mechanism. The recommendations appear in the annex to decision II/3 on electronic information tools and the clearing-house mechanism (ECE/MP.PP/2005/2/Add.4)¹⁵.

That being said it is apparent that under these provisions environmental democracy is subject of the Århus Convention that goes to the core of the relationship between people and governments. The Convention is not only an environmental agreement; it is also a Convention about government accountability, transparency and responsiveness. UN Secretary-General Kofi Annan described the Convention as “*the most ambitious venture in environmental democracy undertaken under the auspices of the United Nations.*”

3.2. ICT support of environmental democracy in EU

¹²http://www.ref.gv.at/uploads/media/Austria_on_the_way_to_a_European_Shared_Environmental_Information_System.pdf

¹³ <http://www.epractice.eu/en/library/296817>

¹⁴ <http://www.epractice.eu>

¹⁵ <http://www.unece.org/env/documents/2005/pp/ece/ece.mp.pp.2005.2.add.4.e.pdf>

In 2005 the Commission outlined a vision for a *Shared Environmental Information System (SEIS)*. This addressed increased sharing and access to environmental information, improvements in monitoring and modernised and streamlined reporting systems.

Activities at the EU level to implement this vision have continued jointly led by the Group of four (Go4: DG Environment, Eurostat, Joint Research Center - JRC and European Environment Agency - EEA) in consultation with Member States mainly through the EEA and Eurostat structures. The involved organisations agreed on a Technical Arrangement on the establishment of ten environmental data centres [29]. The implementation work of SEIS started with the Go4, where the EEA was primarily interested in working on the issues that SEIS will address. The development of SEIS subsequently expanded to involve the services in DG Enterprise and Transport leading the Commission's work on GMES initiative [14].

The general objectives of the SEIS are:

- *the organisation aspect*: Sharing with a political commitment, international partnership and networking activities;
- *the content aspect*: On-line access to environmental information with horizontal (thematic) and vertical (local to global) integration;
- *the infrastructure and service aspect*: A system with tools for interoperability based on the existing ICT infrastructure, current programmes like INSPIRE, Reportnet, GMES and services for eEnvironment [14].

In February 2008, the Commission adopted a *Communication COM(2008) 46 final Towards a Shared Environmental Information System (SEIS)*, which defines a set of SEIS principles for environmental data and information that have to be:

- managed as close as possible to its source;
- collected once, and shared with others;
- available to public authorities;
- readily accessible to end-users to enable them to assess in a timely fashion the state of the environment;
- accessible to enable comparisons at the appropriate geographical scale and
- fully available to the general public.

Furthermore, information sharing and processing should be supported through common, free open source software tools. As announced in the Communication, the Commission in collaboration with the Member States and the EEA, is currently preparing a legal proposal focusing more specifically on modernising the way in which reporting obligations from environmental legislation, is made available using cutting-edge ICT Internet technology.

The Communication has opened a way to a legal basis for an integrated and sustainable EU-wide eReporting System in partnership between the European Institutions (Commission/EEA) and the Member States. The concept for the EU eReporting system is based on the SEIS principles of a decentralised system and builds on the experience with the implementation of the INSPIRE directive and the US EPA eReporting System¹⁶. It will be composed of web-based registers providing access to the information at national level, and a web-portal operating at EU level. MSs will have the flexibility to build their national registers on a

¹⁶ http://www.ref.gv.at/uploads/media/Bericht_OEsterreichs_ueber_die_Anwendung_der_Richtlinie_2003-4-EG.pdf

centrally operated content repository or to interconnect existing information systems and content repositories held in various locations. The implementation of the System shall make use of already existing eReporting infrastructures, both at EU and Member States levels.

In addition, the Czech Presidency of the Council of EU had organised in March 2009 the conference “*Towards eEnvironment*”¹⁷ in Prague, where a memorandum on the SEIS¹⁸ and the legal proposal on EU eReporting System were presented and which became the basis for Presidency conclusions on the issue of eEnvironment.

Due to its distributed concept, the proposed new EU eReporting System had offered an EU-wide integrated platform where thousands of fragmented environmental information sources could be plugged in. It will improve the quality of the environmental data, information and services through data management, as close as possible to the source, responsible for the data. Something worth mentioning is the efforts of the Member States towards SEIS. As aforementioned

Concerning Austria and the implementation of the amended EIA; apart from the clear necessity of a new level of cooperation between the federal government and provinces, towns, cities and municipalities the Austrian government in order to ensure the coordinated implementation that is required set up an eGovernment Working Group (eGov WG) on environmental information within the framework of the platform “digital Austria”¹⁹. One of the major objectives of the eGovernment working group on environmental information is the development of a central environmental information portal (one-stop shop) which is in line with the intentions of the European Commission for SEIS.

3.3 eParticipation enhancing environmental democracy in the EU

As aforementioned, ICT has for some time been considered, by the EU, as a tactical tool for reinforcing citizens’ involvement in the environmental decision-making process and consequently in the policy-making process, enhancing this way transparency and accountability of these processes, leading to a true environmental democracy. This has been achieved by utilizing ICT tools in different EU actions and initiatives towards those ends such as through eDemocracy and eParticipation initiatives.

The rise of a new political network dynamic, where ICT tools and internet in particular, are expected to function as instruments for furthering democracy; they point out, in terms of “*information politics*”, the enabling potential these tools to foster new, dynamic forms of democracy and political participation (see Castells²⁰). eParticipation is also part of these visions of reviving democracy. Macintosh analyses in DEMO-Net project the e-engagement of citizens in the policy process through the use of ICTs, suggesting that e-Engagement applications can be categorized in three main themes, according to the purpose they serve: the dissemination of information, electronic consultation and active participation [20].

eParticipation is considered as having a number of advantages over the conventional participation methods because; firstly the information about the issues being discussed is available from any location that has Web access 24 hours a day and 7 days a week. This gives

¹⁷ <http://www.epractice.eu/en/library/296817>

¹⁸ <http://www.epractice.eu/en/library/299696>

¹⁹ <http://www.austria.gv.at/site/6497/Default.aspx>

²⁰ http://en.wikipedia.org/wiki/The_Internet_Galaxy

the opportunity for more people to participate in public consultations. Secondly, the participation is not restricted by geographical location like in the case of the meetings in public places. Additionally eParticipation is relatively anonymous and less confrontational as compared to a face-to-face meeting. This may encourage the silent majority to participate as long as these methods allow practical non-threatening modes of interaction by being anonymous. It also allows the sharing and exchange of information and ideas in an effective manner.

A particular role in eParticipation is played by the European policies on transparency [8]. Many web 2.0 initiatives are being set up to enhance the transparency and accountability of public processes. They use, re-aggregate and analyze public data to monitor the behaviour of civil servants and politicians. There are relevant examples of applications in other eParticipation activities:

- Politicians using web 2.0 applications for a more direct contact with the electorate. In many EU countries, politicians have blogs and participate in social networking websites. In the UK, both Tony Blair and David Cameron made extensive usage of video-streaming services such as YouTube; in France, the parties of the presidential candidates Le Pen, Royal and Sarkozy opened headquarters in Second Life;
- Bringing citizens' participation upstream;
- Monitoring public representatives;
- Applications enable citizens to monitor administrative procedures such as planning applications and public funding;
- Opening discussion forums;
- Easy creation of pressure groups for specific causes: where participants can find other people interested in the same causes, and also connect to politicians sharing their views.

Apart from the EU and EU Member States there have been other initiatives from other parts of the world that utilize ICT tools and in extend eGovernment/eParticipation etc. with the aim to enhance environmental democracy. A strong example is that of the Obama Administration – USA. The U.S Environmental Protection Agency (U.S EPA²¹) and its Office of Environmental Information (OEI²²) through its Information Access Strategy²³ hopes to enhance access to environmental information so that the USA citizens may all be better equipped to help address the nation's environmental challenges.

Therefore eParticipation is a means to empower the political capabilities of citizens giving them the alternative to involve themselves in the political processes. The EU in view of these new advancements acknowledges these valuable experiences and priorities actions such as the eParticipation Initiative and stresses the need “to build on the ongoing eParticipation explanatory action and define future support mechanisms to explore and exploit the benefits of eParticipation, identify good practice cases and stimulate the exchange of experiences gained by Member States”. In line of those efforts the project U@MARENOSTRUM [16] is formed and co-funded by the EU introducing the objective and expected results of eParticipation project addressing the aforementioned issue of environmental democracy. In the following section we are going to analyze the project by describing its objectives and its consortium and discussing the expected results.

²¹ <http://www.epa.gov/>

²² <http://www.epa.gov/OEI/>

²³ <http://www.epa.gov/nationaldialogue/FinalAccessStrategy.pdf>

4. Conclusion

The discussion on environmental democracy entails a plethora of different as important concepts such as democracy, citizens' engagement, ICT tools, access to information, eDemocracy, eParticipation, eEnvironment etc. If examined alone all these notions cannot lead to coherent perspectives on how environmental democracy could be perceived let alone on how to evaluate ICT tools' role in advancing environmental democracy. However such attempts of contemplating new concepts, as in this paper, are adding something to the process to comprehend them. That being said we will go on to conclude our theoretical findings and make our final remarks.

The results of globalization have raised public and governmental awareness in the necessity of reinterpreting democracy. The discussion on the enhancement of democratic values is probably the timeliest topic in the political arena for the recent years; while political discussion is seen as a tool to democratize the political processes, and while new terms have emerged of describing a "strong democracy" such as deliberative, discussive and participatory democracy [1], indicating the two-way flow of communication between government and civil society [11] that a "good" democracy ought to have.

At the same time the brisk progress in technology has put new technologies under a new perspective concerning their exploitation in areas such as the political. Now their employment for democratic purposes, such as in enhancing democracy, is still viewed suspiciously since ICT does not necessarily lead to greater citizens' involvement. However it can lead to such results if properly managed and this way ICT has an impact on democracy.

Experience shows the vast benefits that eDemocracy and eParticipation can bring in extending participation, widening and enriching the political debate and increasing vote turnout through the development of the access to information. More specifically eParticipation is perceived as a positive tool for increasing transparency and providing the means for the citizens to be more familiarized and involved with the functioning of democratic decision-making processes. The same way as described above eParticipation can be implemented as an application of ICT tools in environmental concerns, promoting the environmental agenda and increase awareness on environmental issues and democratize the decision-making process in the environmental policy area leading to the concept in question, environmental democracy.

It is obvious however that the relationship between democracy and the environment is not monodimensional as well as the effect of democracy on the environment needs to be examined, as it is evidential that the virtues of democracy as a benign political influence on the environment have a positive impact [22]. Of course the implementation of access to information, public participation, and access to justice in decisions that affect the environment is still lacking, however they have become an internationally agreed principle, as said Carlos Lopes, Executive Director of UNITAR and Assistant Secretary General of the United Nations.

As given in the Report prepared for the European Environmental Bureau with the title "*How far has the EU applied the Aarhus Convention?*" [6] the survey conducted for its purpose concludes with various recommendations such as; more awareness-raising among the public and more training for public authorities is needed; swift, independent and low-cost mechanisms to deal with the denial of requests are needed; efforts to develop registers and

post information on websites should be promoted etc. When such recommendations are followed then there is nothing to indicate that there is not going to be an advancement towards those ends.

Lastly, as Principle 10 of the Rio Declaration 1992, states: “Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available” [26].

EU citizens should soon be enjoying legally guaranteed rights to access environmental information held by public authorities, to participate in environmental decision-making and to take violations of environmental law to court. European projects such as SEIS thanks to ICT, will assist in strengthening democracy in environmental policy-making and environmental protection, and improve the effectiveness of environmental policies.

5. References

- [1] ÅSTRÖM, J, ‘Should democracy online be quick, strong or thin?’ *Communications of the ACM*, Vol. 44 Issue 1: 49-51. 2001.
- [2] DOWDESWELL, E., Yale Center for Environmental Law and Policy, The Global Environmental Governance Project. 1997. [Online] Available at: <http://www.yale.edu/gegdialogue/> [Accessed 20.1.2010]
- [3] EC, (European Commission), European Commission Consultancy Report on Progress on the EU Sustainable Development Strategy. Brussels/Rotterdam, 29 February 2008. [Online] Available at: http://ec.europa.eu/sustainable/docs/sds_progress_report.pdf [Accessed 28.04.2009]
- [4] EC, European Commission, Legal Aspects of Marine Environmental Data, Final Report, October 2008. [Online] Available at: http://ec.europa.eu/maritimeaffairs/emodnet/documents/legal_issues/legal_aspects_marine_env_data_report_en.pdf [Accessed 30.04.2009]
- [5] ECBSEA, (Environmental Collaboration for the Black Sea Project). March 5, 2009. Environmental Democracy & Public Participation Principles in the Convention on the Protection of the Black Sea against pollution (Report). [Online] Available at: http://www.ecbsea.org/files//Environmental%20democracy_NGO%20workshop_050309.pdf [Accessed 04.05.2009]
- [6] EEB, (European Environmental Bureau, Report on “how far has the EU applied the Aarhus Convention?”, October 2007 [Online] Available at: <http://www.eeb.org/activities/transparency/AARHUS-FINAL-VERSION-WEBSITE-12-07.pdf> [Accessed 04.05.2009]
- [7] EPRI (2005) Parliamentarians & ICTs: Awareness, understanding and activity levels of European Parliamentarians. European Parliamentary Research Association EPRI

- knowledge project D101 available at:
<http://www.epri.org/epriknowledge/contents/Home.php> (Dec 2006)
- [8] FRISSEN, V., J. MILLARD, et al. (2007). The future of eGovernment: An exploration of ICT driven models of eGovernment for the EU in 2020. D. Osimo, D. Zinnbauer and A. Bianchi, Joint Research Centre.
- [9] Gateway Europa. 2003. Environmental democracy: Commission promotes citizens' involvement in environmental matters. Press Room, Press Releases Rapid. [Online] Available at:
<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/03/1466&format=HTML&aged=0&language=EN&guiLanguage=en> [Accessed 28.04.2009]
- [10] GOUJON, P., LAVELLE, S., DUQUENOY, P., KIMMPA, K., LAURENT, V. (eds). The information society; Innovation, Ethics and Democracy. In honor of Professor J Berleur s.j. London, UK: Springer series. 2007.
- [11] HABERMAS, J., *Between facts and norms: Contributions to a discourse theory of law and democracy*. William Rehg trans., Polity: Cambridge. 1996.
- [12] HAZEN, S., *Environmental Democracy*. United Nations Environment Programme (UNEP). *Our planet – The magazine of the United Nations Environment Programme*. 1997. [Online] Available at: <http://www.unep.org/ourplanet/imgversn/86/hazen.html> [Accessed 28.04.2009]
- [13] HREBICEK, J., LEGAT, R., NAGY, M., *Current Trends in eEnvironment and its Role in eDemocracy*. In *Proceedings of the iEMSs Fourth Biennial Meeting: International Congress on Environmental Modelling and Software (iEMSs 2008)*. Barcelona, Catalonia: International Environmental Modelling and Software Society (iEMSs), 1612-1619, 2008. [Online] Available at: <http://www.iemss.org/iemss2008/uploads/Main/Vol3-iEMSs2008-Proceedings.pdf>, [Accessed 20.1.2010]
- [14] HREBICEK, J., PILLMANN, W., *Shared Environmental Information System and Single Information Space in Europe for the Environment: Antipodes or Associates?* In Hrebicek (ed.) *Proceedings of European conference of the Czech Presidency of the Council of the EU: Towards eEnvironment - Opportunities of SEIS and SISE: Integrating Environmental Knowledge in Europe*. Brno, Czech Republic: Masaryk University, 1-8, 2009. [Online] Available at: <http://www.e-envi2009.org/proceedings.pdf> (p. 447-458) and <http://www.epractice.eu/en/library/289287>, [Accessed 20.1.2010]
- [15] KARAMAGIOLI, E., *Bridging the gap between citizens and decision –makers: Are ICTs the appropriate means for reconfiguring traditional notions of citizenship and participation in public affairs? (?)*, Gov2U, Greece.
- [16] KARAMAGIOLI, E., ORTEGA, M. P., *eParticipation in the service of environmental democracy: Introducing the U@MARENOSTRUM project*. In Hrebicek (ed.) *Proceedings of European conference of the Czech Presidency of the Council of the EU: Towards eEnvironment - Opportunities of SEIS and SISE: Integrating Environmental Knowledge in Europe*. Brno, Czech Republic: Masaryk University, 2009.

- [17] KERDEMAN, M., What Does Environmental Democracy Look Like? World Resources Institute. 2008. [Online] Available at: <http://www.wri.org/stories/2008/04/what-does-environmental-democracy-look-like> [Accessed 28.04.2009]
- [18] LEGAT, R., SCHLEIDT, K., E-Environment Terminology CAHDE, (Ad hoc Committee on E-Democracy of the Council of Europe). London, 26 - 27 February 2008. (Power Point Presentation). [Online] Available at: http://reference.e-government.gv.at/uploads/media/CAHDE_London_e-environment_20080226.pdf [Accessed 27.03.2009]
- [19] LENSCHOW, A., Environmental Policy; Contending Dynamics of Policy Change. In H. Wallace, W. Wallace, and M. A. Pollack, eds *The New European Union Series; Policy – Making in the European Union*. Fifth Edition. Oxford: Oxford University Press. Ch. 12. 2005.
- [20] MACINTOSH, A., Using information and communication technologies to enhance citizen engagement in the policy process. In *Promises & problems of e-democracy; Challenges of citizen on-line engagement*, OECD, January 2004.
- [21] MANUEL J., KRIPP, P. 11, *The CoE recommendation on Electronic Democracy, Modern Democracy*, 1. 2009
- [22] MIDLARSKY, M. I.. Department of Political Science, Rutgers University, *Democracy and the Environment: An Empirical Assessment*, (*Journal of Peace Research*), Vol. 35, No. 3, 341-361. 1998 [Online] Available at: <http://jpr.sagepub.com/cgi/content/abstract/35/3/341> [Accessed 04/05/2009]
- [23] O' BRIAN R., WILLIAMS M., "Global Political Economy, Evolution and Dynamics", Palgrave Macmillan, 2004.
- [24] OECD, *Citizens as partners: Information, Consultation and Public Participation in Policy-Making*. 2001. [Online]. Available at : http://www.soros.org/mn/files/pblsh/pblsh_citizensaspartners.pdf
- [25] UNECE, United Nations Economic Commission for Europe. *Aarhus Parties Commit to strengthening Environmental Democracy in the UNECE region and beyond*, 2008. [Online] Available at: <http://aarhusclearinghouse.unece.org/news.cfm?id=1000278&year=2008> [Accessed 27.04.2009]
- [26] UNEP, United Nations Environment Programme, *Environment for Development, Rio Declaration*, [Online] Available at: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163> [Accessed 04/05/2009]
- [27] WEBER, L., LOUMAKIS, A., BERGMAN, J., *Who Participates and Why? An Analysis of Citizens on the Internet and the Mass Public*. *Social Science Computer Review*; 21(1), 25-32. 2003.

- [28] WHYTE A, XENAKIS A, PUIGGALI P, MACINTOSH, A., “Mobile Services for Parliamentarians: Drivers & Expectations“, paper presented at 6th International EGOV conference, September 3-6 2007, Regensburg
- [29] ZANGL, S., LOHSE, J., STAHL, H., SCHÜLER, D., GENSCHE, C.O., Implementation of Environmental Data Centres. Final report, Freiburg. Austria: Öko-Institut 2007. [Online] Available at: <http://www.oeko.de/oekodoc/477/2007-081-en.pdf> [Accessed 20.1. 2010]

