MODEL OF REGULATION FOR THE PROTECTION OF WATER RESOURCES

by **Francesco ANASTASI**, University of Messina, Italy.

Water is a fundamental resource for the birth and development of human civilization.

Ernst Kapp classified the great ancient civilizations by assuming water as a taxonomic criterion, distinguishing three types of civilization: the potamic, the thalassic and the oceanic cultures[1].

In the same sense, Carl Schmitt had elaborated a contrast between terrestrial civilizations and oceanic civilizations, assuming water as the foundation of every civilization[2].

Nowadays the distribution of water is unbalanced: the resource is in continuous contraction and the indiscriminate use of the resource combined with climate change will increase the imbalances.

It is calculated that within the terrestrial hydrosphere, fresh water constitutes about 2.5%, and no more than 0.26% overall can be used for human purposes, the remaining quantity being constituted by the Antarctic ice.

According to the 2015 edition of the World Water Development of the United Nations, by 2030 is expected a 40% drop in water availability, unless the management and the use of this resource improve by then[3,4].

The idea of a right to water, as a constitutionally protected value and as a guaranteed essential common good, is one of the fundamental problems of the 21st century[5].

In the European law system, there are many problems concerning the use of water: for example, the various forms of pollution that threaten rivers, lakes and underground waterways or the various uses of water resources[6].

On this point, also Pope Francis in the Encyclical *Laudato si,* dated 24 May 2015, has made many considerations on the theme of "care of the common home" and on the link, today increasingly evident among the concerns for nature and justice towards the poorest.

The Pope addresses in his text an invitation to act to the States to ensure the right of everyone to access water: "to face the

[1] See E. KAPP *Elements of a Philosophy of Technology On the Evolutionary History of Culture.* Edited by Jeffrey West Kirkwood and Leif Weatherby, 2018.

[2] See C. SCHMITT, *Land und Meer. Eine weltgeschichtliche Betrachtung*, Stuttgart, Klett-Cotta, 1954, trad. it. Milano, Adelphi, 2002.

[3] See *The UN World Water Development Report 2015, Water for a Sustainable World*, disponibile at: http://www.unesco.org/ ; *UN World Water Development Report, Wastewater: The Untapped Resource*, 2017, available at: http://www.unesco.org/.

[4] See https://www.un.org/sustainabledevelopment/water-and-sanitation/.

[5] See B. EDWARD., E. J. DE HAAN (edited by), *The Scarcity of Water, Emerging Legal and Policy Responses*, Kluver Law International, 1997.

[6] See R. GIUFFRIDA, F. AMABILI, *La tutela dell'ambiente nel diritto internazionale ed europeo,* Giappichelli, Torino.

fundamental problems that cannot be solved by the actions of individual countries, a global consensus is essential. for example, [...] to ensure access to drinking water for all" [7].

Most of the rules on water are addressed to states, which often deal mainly with affirming their territorial sovereignty over water resources present in their territory rather than guaranteeing the right to water of their citizens.

Furthermore, under the international law, the right to water is subject to a series of normative acts of different legal value, from the declarations of the General Assembly of the United Nations to acts of greater effectiveness from the point of view of the obligation, which, moreover, are not addressed in the same direction.

This contributes greatly to making the overall regulatory framework even more uncertain and contradictory.

For instance, in the Chart of Nice, there is no precise reference to right to water, whilst some constitutions of African countries have recognized this right.

It should be noted that the effects of privatization policies are more aggressive when they are aimed at territories in which there is not a strong welfare tradition, as in the EU, capable of balancing the most radical thrusts of privatization and liberalization.

It is not a coincidence, therefore, that the most violent popular reactions against the processes of privatization of the water resource took place in Cochabamba in Bolivia and that the constitutionalization of the right to water is affecting South America.

In particular, Constitutions of Bolivia (article 20.III) of 2009, Ecuador (article 3) of 2008 and Uruguay (article 47) of 2004[8] are among the constitutions in which a right to water was expressly stated.

As it has been pointed out[9], the change to the Bolivian constitution is a direct consequence of the revolt in 2000, which was known as "water revolt".

These events explain both the forecast of access to water and sanitation as a human right, and the prohibition of forms of privatization of the water service.

Also worthy of note are other provisions of the Bolivian constitution: for example the §373 defines the fundamental right to water for life, and attributes to the State the task of guaranteeing and promoting access to water resources, implementing a series of principles including those of solidarity, equity and sustainability[10].

---

[7] See B. BISCOTTI, E. LAMARQUE, *Cibo e acqua. Sfide per il diritto contemporaneo: Verso e oltre Expo 2015*, Giappichelli, Torino.

[8] See A.HILDERING, *International Law, Sustainable Development and Water Management*, Eburon, 2006; also C. IANNELLO, *Il diritto all'acqua. L'appartenenza collettiva alla risorsa idrica*, la scuola di Pitagora.

[9] *Ibidem.*

[10] See "El agua constituye un derecho fundamentalísimo para la vida, en el marco de la soberanía del pueblo. El Estado promoverá el uso y acceso al agua sobre la base de

The proclamation of the right to water as fundamental has consequently determined a centralization of the competences: in Bolivia, it was established the Ministry of Water.

§ 1 – WATER, BETWEEN PROPRIETY AND COMMON GOOD

A) The Debate Between Property and Common Goods: From Grozio to Kant

The right to water is one of those rights that transcends and embraces the whole history of man and society.
It is paradoxical, however, that in our contemporary society we are talking about the right to water as if it was something new, almost a post-modern innovation.
With reference to water, some spoke of "ancient law" as an expression of the vision that an historical civilization has of essential relationships between man and society, property and nature[11].
In reconstructing the philosophical-juridical debate between property and common goods, it seems useful to start from the conception of Grotius[12], who, in theorizing the concept of private property as a natural right, alluded to a concept of property other than real estate or business - which we are used to - incorporated into the Napoleonic Code.
According to Grotius, natural law, which derives from the rational and social nature of man, is independent for what concerns its validity, not only from the will of God, but also from its existence (it would be valid "*etiam si givemus Deum non esse*", Prolegomeni, 11)[13].
In this context, private property is an autonomous legal figure, but it is not possible to attribute the characteristics of a natural fact to it: its assignment to specific individuals is the fruit of human activity and its appropriation[14].
In Grotius' view, the first act of appropriation occurs already in the consumption of food; the same process is then extended to the appropriation of objects such as clothing, livestock and finally the

principios de solidaridad, complementariedad, reciprocidad, equidad, diversidad y sustentabilidad. II. Los recursos hídricos en todos sus estados, superficiales y subterráneos, constituyen recursos finitos, vulnerables, estratégicos y cumplen una función social, cultural y ambiental. Estos recursos no podrán ser objeto de apropiaciones privadas y tanto ellos como sus servicios no serán concesionados", available at: https://bolivia.justia.com/nacionales/nueva-constitucion-politica-del-estado/cuarta-parte/titulo-ii/capitulo-quinto/.

[11] See P. MADDALENA, *I beni comuni nel codice civile, nella tradizione umanistica e nella costituzione della repubblica italiana*. 5 October 2011, federalismi.it, available at: https://www.federalismi.it/.

[12] A. BALDASSARRE, *Diritti inviolabili*, in Enc. Giur., 1989, about the thinking of U. Grozio, *le droit de la guerre et de la paix, (1625).*

[13] GROTIUS, *Prolegomeni al diritto della guerra e della pace*, trad. by Guido Fassò, and Carla Faralli, Morano, Napoli 1979.

[14] With his teaching, Grotius opposed the voluntary address taken up by some currents of Protestant thought that saw the root of natural law in God's command rather than in reason considered as the true nature of man.

appropriation of land and natural resources. This appropriation, which does not result in mere consumption, is the result of a tacit or manifest agreement[15].

Specifically, John Locke in the book on the ownership of the Second treaty on the government questions how the ownership of water should be understood.

In particular, the English philosopher states that water belongs to everyone, regardless of who drawn it: in its natural state it presents itself, in its natural state, as a collective natural good, indivisible and inappropriate[16].

Therefore, in Locke's vision water is a natural common good that man has the right to use. However, when the water is drawn from the state of natural sharing to the sphere of ownership of the individual who uses it for the satisfaction of their daily needs[17].

Starting from this perspective, Locke theories the right to property over all goods that are the result of human work: consequently, water when it was drawn or extracted passed into the private juridical sphere of the individual[18].

With reference to the dialectic of commons-private property, the philosophy of German idealism developed a particularly in-depth reflection on the fundamentals of private property and consequently on the legal regime of common goods.

In this context, the reflection of Immanuel Kant, rejecting the idea of Locke according to which work transforms common property into private property, recognizes that this is unthinkable without previous community possession (*communia fundi originaria*) [19].

The exploitation of land and resources necessarily depends on the availability and possession of the same. Therefore, according to Kant it must be possible to "have as mine any object of my will", or, otherwise said, private property can coexist with the freedom of all people according to a universal law: to conclude otherwise would deny the same foundation of freedom[20]. In fact, "the connection established by Kant between freedom, self-determination and property is at the base of his political doctrine"[21].

---

15 R. BRANDT, *Eigentumstheorien von Grotius bis Kant*, Stuttgart-Bad Cannstatt, 1974.

16 J. LOCKE, *Secondo trattato sul governo. Saggio concernente la vera origine, l'estensione e il fine del governo civile* (trad. by A. Gialluca), BUR Biblioteca Univ. Rizzoli, 2001.

17 *Ibidem.*

18 See J. LOCKE, *Secondo trattato sul governo. Saggio concernente la vera origine, l'estensione e il fine del governo civile* (trad. A. Gialluca), BUR Biblioteca Univ. Rizzoli, 2001.

19 I. KANT, *La metafisica dei costumi, a cura di G. Vidari*, Laterza, 2009.

20 *Ibidem.*

21 W. EUCHNER, W. SANTAGATA, A. GAMBARO, *Proprietà* in *Enciclopedia delle scienze sociali*, Treccani, 1997.

B) From the Tragedy of Common Goods to the Solutions of Governing the Commons

The almost Manichaean debate between property and common goods, of which we gave a very quick essay in the twentieth century has led to some interesting elaborations that seems opportune to reconstruct briefly in this context.

Of great interest is the idea provided by Garrett Hardin, who, on the basis of the intuitions of William Forster Lloyd[22], has elaborated a refined theory made explicit in the article published in Science of 1968, "The tragedy of common goods".

In his work, the starting point of the contemporary debate on the subject, Hardin states that users of a common resource are trapped in a dilemma between individual interest and collective utility, sustainable in situations characterized by scarcity of the population (lack of population).

The technical solutions that have been used in the past, in reality, only represent expedients able to move the problem ahead of time. It is therefore necessary that the State imposes "coercion" as a remedy and only system to avoid "tragedy". According to Hardin, a Statal solution that would control the market can lead to the elaboration of political and legislative solutions, able to safeguard the interest and the good of the community, placing these values before the protection of individual liberty and individual rights, first of all the property right[23].

A completely different methodological approach to the subject of property is that of the so-called neo-contractualism[24]. This orientation refers to the political economy, from which the concept of *homo oeconomicus* (the main exponents are Buchanan and Nozick), which would have an unlimited right to property.

Inspired by the seventeenth-century natural lawyers (in this case, Buchanan refers to Hobbes, and Nozick to Locke), the exponents of this approach project men into a hypothetical state of nature, in which they are forced to recognize that they are incapable of

[22] "If a person puts more cattle into his own field, the amount of the subsistence which they consume is all deducted from that which was at the command, of his original stock ; and if, before,there was no more than a sufficiency of pasture, he reaps no benefit from the additional cattle,what is gained in one way being lost in another. But if he puts more cattle on a common, the food which they consume forms a deduction which is shared between all the cattle, as well that of others as his own, in proportion to their number, and only a small part of it is taken from his own cattle. In an inclosed pasture, there is a point of saturation, if I may so call it, (by which, I mean a barrier depending on considerations of interest,) beyond which no prudent man will add to his stock. In a common, also, there is in like manner a point of saturation. But the position of the point in the two cases is obviously different. Were a number of adjoining pastures, already fully stocked, to be at once thrown open, and converted into one vast common, the position of the point of saturation would immediately be changed." See W. F. LLOYD, *Two Lectures on the Checks to Population*

[23] G. HARDIN, "The Tragedy of the Commons", *Science*, 13 December 1968: Vol. 162 no. 3859.

[24] J. BUCHANAN, *Property as a guarantor of liberty*, Aldershot 1993.

repressing or regulating themselves the conflicts that inevitably arise between beings driven by selfishness.
This is how "protective associations" are born, to which the services are used by individuals, against payment, to protect their property and their personal rights. When one of these associations assumes a monopoly position, it assumes the functions of "minimal state"[25]. This argument leads to the thesis that the minimal State possesses only those competences attributed to it by individuals interested in protecting legitimately acquired assets (property and personal rights).
Elinor Ostrom has questioned the idea that there is only one way to solve the problems posed by common goods - whether it is Hardin's statistic hypothesis or the subdivision and privatization of the resource, an essentially economic idea - with the recent publication of "Governing the Commons"[26].
It is noted that both the authoritarian-centralized management of the commons as well as its privatization, although usable in certain situations, do not constitute the solution nor are they themselves immune from significant problems.
Starting from the study of empirical cases, in which it is shown how real individuals are not hopelessly condemned to remain imprisoned in the problems of collective action related to the shared exploitation of a resource, Ostrom has questioned the idea that there are models universally applicable[27].
On the other side, in many cases individual communities appear to have managed to avoid unproductive conflicts and to reach agreements on the sustainable use of common resources over time through the endogenous development of institutions entrusted with their management28.

§ 2 – Water as a Right – The Right to Water in the European Perspective

The European Union has always been very sensitive to the planning of water resources and has promoted water resources planning instruments to guarantee essential water quality levels[29].
At present, the main problems concerning the management of water resources are due to the lack of public investments for the

[25] R. Nozick, *Anarchy, state and utopia,* Oxford-New York 1974 *(tr. it.: Anarchia, stato e utopia,* Firenze, 1976).
[26] E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, 1990, Cambridge University press.
[27] *Ibidem.*
[28] *Ibid.*
[29] See also P. Urbani, "Il recepimento della direttiva comunitaria sulle acque: profili istituzionali di un nuovo governo delle acque", in *Riv. giur. amb.*, 2004, pp. 209 ss. e G. Cordini, *La tutela dell'ambiente idrico in Italia e nell'Unione europea*, *ivi*, 2005; also L. Garofalo, "Osservazioni sul diritto all'acqua nell'ordinamento internazionale", in *Analisi Giuridica dell'Economia*, 1/2010, pp. 15-28; *See* C. Joachim and L. Mazeau, *Between risk and complexity: European water protection law issues,* in Journal international de bioéthique et d'éthique des sciences, 2017.

efficiency of the water network, as well as to consumption and dispersion by private individuals both in the performance of economic activities and for domestic use.
However, at present Europe seems to be very oriented towards accentuating the individual dimension of the right to water, to the detriment of the collective or communitarian right. Litigation on environmental issues has shown that there is no place for popular actions other than those related to compensation for environmental damages.
Therefore, the European legal system does not offer new ideas in the conception of common goods.
Going into more details, the right to water is assumed to be linked to the human fundamental rights on which the Union is founded (Article 2 TEU) and indirectly linked to the environmental protection referred to in art. 37 of the Charter of fundamental rights of the European Union and also in art. 191 TFEU, dedicated specifically to the European Union's environmental policy[30].
The first Council Directive, n. 75/440/EEC on the quality of surface water was intended for the production of drinking water in the Member States, emphasized in the preamble "the need to protect human health and to exert control over surface water intended for the production of drinking water and on the treatment of such water purification"[31].
In 1980, the Council adopted a directive on the quality of water intended for human consumption, which was then repealed by Council Directive 98/83 with the aim of protecting "human health from the adverse effects of contamination of water intended for human consumption, ensuring its healthiness and cleanliness"[32].
EU water law had therefore initially developed in a fragmented way, focusing on the different forms of water use and pollution, on issues of implementation and subsidiarity[33].
The breakthrough in EU policy on this matter was achieved by the Directive of the European Parliament and of the Council known as the *Water Framework Directive*.
The Directive is innovative from many points of view. It conceives the water management referring to the "river basin" (art. 2, 13) according to an integrated approach. It also proposes to regulate the management of fresh water combining quantitative and qualitative aspects including both surface and underground waters[34].

---

[30] *See* S. HENDRY, *Frameworks for Water Law Reform*, Cambridge University Press, 201; also S. DE VIDO, "Il diritto all'acqua nella prospettiva europea", in *Il diritto all'acqua, atti del seminario di studio svoltosi a Milano il 26 novembre 2015* (by L. Violini e B. Randazzo), Giuffrè Editore, 2017
[31] Directive of the council, n. 75/440/CEE
[32] Directive of the council n. 91/676, to avoid nitrates pollution.
[33] E. MORGERA, *Environment*, in S. Peers, C. Barnard (eds), *European Union Law* (OUP, 2014).
[34] See S. HENDRY, *Frameworks for Water Law Reform*, Cambridge University Press, 2015.; also S. DE VIDO, "Il diritto all'acqua nella prospettiva europea", in L. VIOLINI and B.

However, the Directive merely states, in a general way, in the first paragraph of the preamble that "water is not a commercial product on a par with others, but a heritage that it must be protected, defended and treated as such".
Related to the Framework Directive are also the Council and European Parliament Directives adopted in 2006 and 2008 respectively on the protection of groundwater against pollution and deterioration and on the environmental quality standard in the water policy field[35].
More recently, it was adopted the Directive 2014/23/EU of the European Parliament and of the Council on the awarding of concession contracts: it explicitly excludes concessions in the water sector from its scope[36].
In the preamble, in paragraph 40, we find an important reference to water as a "good", "the importance of water as a public good of fundamental value for all citizens of the Union"[37].
Not even the interpretation of the aforementioned directives provided by the Court of Justice of the European Union has contributed to the affirmation of the human right to water. And indeed there were a lot of infringement proceedings issued by the European Commission against one of the EU member states for failure or incorrect transposition of one of the aforementioned directives[38].
A support for the progressive recognition of the right to water in the EU, and consequently also international, actually, came from civil society, thanks to a new instrument of participatory democracy made available by the Treaty of Lisbon: the initiative of European citizens (ICE)[39].

RANDAZZO, *Il diritto all'acqua, atti del seminario di studio svoltosi a Milano il 26 novembre 2015*, Giuffrè Editore, 2017.

35 Directive 2008/105/CE of the EU Parliament and the Council of 16 december 2008, GU L 348, 24,12.2008 p. 84, also, Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, in O L 288/28, 6,11,2007, 27-34

36 See S. HENDRY, *Frameworks for Water Law Reform*, Cambridge University Press, 2015; also S. DE VIDO, "Il diritto all'acqua nella prospettiva europea", in L. VIOLINI and B. RANDAZZO, *Il diritto all'acqua, atti del seminario di studio svoltosi a Milano il 26 novembre 2015*, Giuffrè Editore, 2017.

37 Directive 2014/23/CE of the EU Parliament and the Council, del 26 February 2014 GU L 94, 28.3.2014.

38 Economic Social Cultural rights Committee, General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant) adopted at the Twenty-ninth Session of the Committee on Economic. *Social and Cultural Rights*, 20 gennaio, 2003. E/C.12/2002/11. According to some authors, the Court has contributed to the "strengthening of the legal basis for the human right to water" (M. A. SALMAN and SIOBHÁN MCINERNEY-LANKFORD, *The Human Right To Water*, Washington 2004).

39 Cfr, *interalia*, F. FETACNO, "Il diritto di iniziativa dei cittadini europei: uno strumento efficace di democrazia partecipativa?", in *Rivista italiana di diritto pubblico comparato*, 2011, p. 727 Ss.; also "il nuovo istituto di democrazia partecipativa le sue prime applicazioni", in *Studi sull'integrazione europea*, 2012, p. 523 ss.; G. ALLEGRI, "Il diritto di iniziativa cittadini europei: verso quale democrazia partecipativa in Europa?" in S. Civitarese MATTEUCCI, F. GUARRIELLO, P. PUOTI (eds), *Diritti fondamentali e politiche della UE di Lisbona*, Santarcangelo, Maggioli, 2013.

As noted by the doctrine, the ECI is set up as a form of "initiative (of citizens) for an initiative (the legislative one of the European Commission)"; therefore, an absolutely unique and innovative tool in the legal system of the Union. In other words, the ICE would operate as a "law initiative", which is also "transnational", given the participation of citizens of different Member States[40].
Three initiatives reached the required number of statements of support and were presented to the Commission. The first to reach one million signatures was "Right2water" (1,659,543 signatures).
In the proposal, the citizens' committee urged the Commission to propose legislation aimed at establishing the universal human right of drinking water and sanitation.
The Commission responded to the European Citizens' Initiative with the Communication of 19 March 2014, stating that the right to safe drinking water and sanitation as internationally established must always be linked to the right to life and human dignity as if it is a "derived right"[41] rather than an autonomous right.
In the communication, the Commission emphasizes EU action to guarantee access to drinking water and sanitation for the population[42].
Recently, with the Communication of January 31, 2012, the European Commission presented a proposal for a Directive of the European Parliament and of the Council in order to amend the Directives n. 2000/60 / EC and 2008/105 / EC. The amendments were limited to the management of the substances in the water sector: it was "technical" proposal, evidently not aimed at the recognition of the human right to water[43].
The European Parliament, vice versa in its resolution of 8 September 2015, invited the Commission (paragraph 10) to present legislative proposals, "including, where appropriate, a revision of the Water Framework Directive which recognizes universal access and law human water" calling for a universal access to safe drinking water and sanitation to be recognized in the EU Chart of Fundamental Rights.
This would imply the possibility for individuals to claim the rights deriving from the directive before the national courts.
Among the aims of the Directive, in addition to the quality of the water, it should be compulsory that every State must guarantee access to a minimum amount of water necessary to satisfy the essential needs of all individuals.
However, the essential level could be defined internally at national level, based on indications from the World Health Organization and / or the European Commission.

---

[40] See S. DE VIDO, "Il diritto all'acqua nella prospettiva europea", in L. VIOLINI and B. RANDAZZO, *Il diritto all'acqua, atti del seminario di studio svoltosi a Milano il 26 novembre 2015*, Giuffrè Editore, 2017.
[41] Comunication of the Commission, Bruxelles, 19.3.2014 COM(2014) 177 final.
[42] *Ibidem.*
[43] SEC(20l1) 1546 final, SEC(2011) 1547 final. Bruxelles, 31.1.2012 COM(2011) 876 final 2011/0429 (COD)

This would ensure on one hand the opportunity for individuals to own rights that can be exercised before internal jurisdictions, and on the other hand the opportunity for the Court of Justice to interpret the provisions of the Directive.
The Court of Justice in this way could assess whether the minimum quantity, set by the State, of water necessary for the essential needs of individuals, meets the parameters detected at the international level.
This would ensure that the elements of the right to water (availability, accessibility, acceptability, affordability and quality) would be subject to a minimal harmonization.
This proposal is only one on the long route of the affirmation of the right to water as a norm of international law.
One of the important indications that could derive from the Directive could be the identification of the "right price" of the water, to be defined at a national level according to the indications of the Directive itself.
In this context, however, it is noted that the European Parliament stressed in this regard that the Commission should not - under any circumstances - promote the privatization of water in the context of an economic adjustment or in any other procedure on coordination of the EU's economic strategy (paragraph 22).

§ 3 – Beyond the Regulation of the Public Service: Management Models

A) Introduction

The choice between different systems to tackle the different environmental problems does not only entail a purely instrumental analysis of the best way to achieve environmental protection objectives, but also raises controversial ethical and political issues[44].
The main objection to the use of economic incentives for environmental protection is ethical. It is argued that human life and ecological integrity are priceless values, which must not be corrupted by the market. Economic incentives, reducing environmental protection to an economic calculation, compromise fundamental rights and allow powerful companies to obtain permission to inflict damage simply by paying a fee[45].
These theses are often cited as arguments in favor of regulation: the state should absolutely establish what rights to health and to the environment the economic actors must respect and should force them to do so[46].
The preference for the public ownership of areas of exceptional landscape value is also based on the ethical concept that these areas

[44] McCloskey, H. J., *Ecological ethics and politics*, Totowa, N. J., 1983.
[45] Kelman, J., *What price incentives? Economists and the environment*, Boston 1981.
[46] See RICHARD B. STEWART E EMILIO GERELLI, *Ambiente*, Tutela dell' , Enciclopedia delle scienze sociali (1991), Treccani.

are a symbol of the nation, representing an important part of its cultural heritage and must therefore belong to the nation in the interest of the entire population.
This position is widespread in the United States and much less shared in Europe, where important elements of cultural heritage are often in private hands.
The choice and implementation of a policy of environmental protection that takes place through certain institutions rather than others can influence the strategic balance between the various interest groups that participate in it and favor certain results in place of others.
Today there is greater awareness of the problems of collective action and representation, and therefore of the danger of public decisions that reflect private, economic, ideological and bureaucratic interests.
The advocates of 'legalization' argue that there is a tendency to lose sight of the objectives set by environmental laws during the phase of their implementation at the administrative level; in particular, to include environmental interests in the decision-making process could open up to a review and examination of the community[47].
A use of economic incentives for environmental protection, according to the most recent theoretical elaboration, contributes to ensuring greater responsibility for political decisions, which must establish the level of incentive, entrusting concrete implementation to the market[48].
This approach avoids the risk of leaving a wide margin of discretion to public administrators in the context of choices regarding the administration of resources: the most significant risk for the protection of the environment is precisely the discretionary power[49].

B) Regulation Models

As noted above, therefore, water should be considered as a fundamental right[50], even though at the same time it is a common good since it belongs equally to everyone, and every man has the right to use it for satisfying his needs accordingly.
The public water management model, however, has not regulated the private exploitation of water, except for the management of discharges[51].

---

47 *Ibidem.*
48 *Ibid.*
49 COASE, R., "The problem of social cost", in *Journal of law and economics*, 1960, III; MCCLOSKEY, H. J., *Ecological ethics and politics*, Totowa, N. J., 1983; KELMAN, J., *What price incentives? Economists and the environment*, Boston 1981; MILLER, C., WOOD, C., *Planning and pollution*, Oxford 1983; RICHARD B. STEWART E EMILIO GERELLI, *Ambiente*, Tutela dell', Enciclopedia delle scienze sociali (1991), Treccani.
50 FROSINI T. E., "Il diritto costituzionale all'acqua", *Rivista giuridica del Mezzogiorno*, Fascicolo 3, settembre 2010.
51 IANNELLO C., *Il Diritto dell'acqua – l'appartenenza collettiva della risorsa idrica*, la scuola di pitagora editrice, Napoli, 2012.

In this context, and based on the empirical analysis of the exploitation of the resource, both market failures have emerged, namely the inadequacy of private law (civil liability and the judicial protection of rights) [52] to ensure effective protection of the environment, but also the defects of a public regulation based on rigid mechanisms of *command and control*[53].

Too stringent constraints and rigidities have discouraged the introduction of new products or the use of more efficient production techniques with penalizing investments in the sector[54].

In fact, the planning deeds[55], in the abstract, fundamental rationalization tools, have not succeeded in generating good practices or protocols capable of generating virtuous mechanisms.

It is therefore necessary to assess whether the creation of artificial markets[56], similarly to what happened in the electricity sector, could generate a mechanism to increase the efficiency of private exploitation of the resource, fueled by a demand induced by the need to comply with legal obligations affecting certain types of companies[57].

In recent years, these models have been tested in Italy and in other European countries with the effect of implementing the virtuous and practical behaviors of rationalization of resources and their exploitation.

In particular, the model developed in Italy with regard to the electricity system envisages three types of "white, green and black" certificates.

In particular, white certificates, also known as Energy Efficiency Certificates (TEE), represent an incentive to reduce energy consumption in relation to the distributed good.

The proposed mechanism - innovative worldwide - suggest the creation of a market of energy efficiency certificates, certifying the actions taken.

---

[52] CLARICH M., *La tutela dell'ambiente attraverso il mercato*, Diritto Pubblico, 2007; M. Cafagno, *La cura dell'ambiente tra mercato ed intervento pubblico: spunti dal pensiero economico*

[53] See R.B. STEWART, *Markets Versus Environment*, cit., pp. 10 ss.; A. OGUS, *Regulation. Legal form and economic theory*, cit., pp. 249 s., also see M. FAURE, *Environmental regulation*, cit., p. 460.

[54] See R.B. STEWART, *Markets versus environment?*, european university institute, jean monnet chair papers, 1995, n. 19; m. CAFAGNO, *la cura dell'ambiente tra mercato ed intervento pubblico: spunti dal pensiero economico*, in *atti del primo colloquio di diritto dell'ambiente promosso dall'associazione italiana di diritto urbanistico* (teramo, 29- 30 aprile 2005), milano, Giuffrè, 2006, pp. 191 ss., also see R.B.Stewart, *il diritto amministrativo nel xxi secolo*, in *riv. Trim. Dir. Pubbl.*, 2004.

[55] See G. GUIDARELLI, "Pianificazione e programmazione in materia di risorse idriche"; in N. LUGARESI, F. MASTRAGOSTINO (a cura di), *la disciplina giuridica delle risorse idriche*, bologna, 2003, pp. 241 ss. Also M. COLUCCI, F.C. RAMPULLA, A.R. MAJNARDI, "Piani e provvedimenti nel passaggio dall'amministrazione al governo delle acque", in *Riv. trim. dir. pubbl.*, 1974, In the same sense M. BROCCA, "Commento all'art. 65 del d.lgs. 3 aprile 2006, n. 152", in N. LUGARESI, S. BERTAZZO, *Nuovo Codice Dell'ambiente,* Maggioli, 2009, Rimini.

[56] *See* E.L. CAMILLI - F. DI PORTO, "Interaction between electricity liberalization and environmental targets", in F. DI PORTO, *Energy Law in Italy*, London-The Hague-Boston, Kluwer Law International, 2006.

[57] RICHARD B. STEWART E EMILIO GERELLI, *Ambiente*, Tutela dell', Enciclopedia delle scienze sociali (1991), Treccani.

White certificates concern three types of interventions: saving electricity, saving natural gas and/or saving other fuels. The interested distributors can be both compulsory and on a voluntary basis: all the distributors of electricity and gas are obliged; whose final users exceed 100,000 units.
The Authority with an economic contribution, whose value is annually established by the Authority itself, rewards the compliance with energy saving limits. Moreover, it is possible to earn by selling excess certificates thanks to the achievement of savings higher than the yearly one.
On the other hand, those who fail to comply with the minimum obligations are sanctioned and must purchase additional securities necessary to achieve the set minimum target on the market[58].
The Commission noted that these instruments allow the achievement of production and consumption targets for renewable energy sources within market mechanisms that guarantee efficiency, while offering less certainty in investor returns[59].
It has been calculated that these demand policy actions will make it possible to achieve, as a result, energy savings equal to the average annual increase in national energy consumption in the period 1999-2001, with lower CO2 emissions.
This intuition of a regulated market that incentivizes supply and distribution, but that sanctions at the same time all the improper practices in order to pollute the resource, can constitute an opportunity to overcome the existing conflicts, granting everyone access to a clean and usable resource.

[58] T. M. MOSCHETTA, "I regimi nazionali di sostegno all'energia prodotta da fonti rinnovabili: questioni di coerenza con i principi del mercato comune dell'unione europea", *Rivista Quadrimestrale Di Diritto Dell'ambiente*, Numero 2/2015 G. Giappichelli.
[59] See *Commission Staff Working Document – European Commission Guidance for the Design of Renewables Support Schemes*, SWD (2013) 439 Final, del 5.11.2013, paragraph 3.1.4.