

ENVIRONMENTAL LICENSING OF TOURIST ENTERPRISES USING THERMAL WATERS IN CALDAS NOVAS (GO): A MECHANISM OR A CONSTRAINT TO SUSTAINABILITY?¹

Hamilton Afonso de Oliveira²

Universidade Estadual de Goiás (UEG) |

Sheila Cristina Endres Palmerston³

Tribunal de Justiça do Estado de Goiás (TJ/GO) |

Francisco Leonardo Tejerina-Garro⁴

Universidade Evangélica de Goiás (UniEVANGÉLICA) |

ABSTRACT

The environmental licensing process allows not only prior analysis of the environmental impacts of licensed activities, but also the implementation of conditions that mitigate the negative consequences of their execution to achieve sustainability. This article aimed to verify if the municipal licensing agency is effective in promoting environmental balance in the control of the activity under examination. To this end, the processes for obtaining installation and operating licenses for tourist enterprises of three economic groups, holders of the largest areas of hot springs mining, submitted to the

¹ This research was developed with the financial support of the Graduate Support Program of the Universidade Estadual de Goiás and the Escola Judicial de Goiás to the second author.

² PhD in History from the Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP). Master in History of Agrarian Societies from the Universidade Federal de Goiás (UFG). Degree in History from the Faculdade de Educação Ciências e Letras de Morrinhos (FECLEM). Professor at the Universidade Estadual de Goiás (UEG). Member of the Academia Morrinhense de Letras. Lattes Curriculum: <http://lattes.cnpq.br/1906395147663952> / ORCID: <https://orcid.org/0000-0002-5723-4401> / e-mail: hamiltonafonso@uol.com.br

³ PhD student in Society, Technology and Environment at the Universidade Evangélica de Goiás (UniEVANGÉLICA). Master in Environment and Society from the Universidade Estadual de Goiás (UEG). Specialist in State Law from Universidade Cândido Mendes (UCAM). Degree in Law from the Pontifícia Universidade Católica de Goiás (PUC-GOÍÁS). Judiciary Clerk II of the Tribunal de Justiça do Estado de (TJ/GO). Lattes Curriculum: <http://lattes.cnpq.br/5085869140278894> / ORCID: <https://orcid.org/0000-0001-9370-4864> / e-mail: sheilaendres@gmail.com

⁴ PhD in Ecology of Continental Aquatic Systems from the Université de Montpellier 2 – Sciences et Techniques (UM2). Master in Biology from the Université du Québec à Montréal (UQAM). Degree in Biological Sciences from the Universidade Federal de Goiás (UFG). Degree in Biological Sciences (Ecology modality) from UFG. Full Professor at the Pontifícia Universidade Católica de Goiás (PUC-GOÍÁS). Professor at the Universidade Evangélica de Goiás (UniEVANGÉLICA). Lattes Curriculum: <http://lattes.cnpq.br/6719234350740061> / ORCID: <https://orcid.org/0000-0002-5159-8108> / e-mail: francisco.garro@docente.unievangelica.edu.br

Municipal Secretariat of Environment and Water Resources (SEMMARH) of Caldas Novas (GO), were analyzed, identifying their potentials and weaknesses in terms of compliance with legal precepts and technical and operational acuity. The information was collected based on the processes referring to the period between February 2013 and June 2018. It was concluded that decisions are more political than technical, without considering the necessary technical analyses of the implications of potentially-polluting activities, preventing the formulation of effective environmental conditions to achieve tourism sustainability in Caldas Novas (GO).

Keywords: environmental management; water resources; environmental impact.

RESUMO

O processo de licenciamento ambiental permite não apenas a análise prévia dos impactos ambientais das atividades licenciadas, mas também a implementação de condicionantes mitigadoras das consequências negativas de sua execução com o intuito de alcançar a sustentabilidade. Este artigo teve como objetivo verificar se o órgão licenciador municipal é eficaz em promover o equilíbrio ambiental no controle da atividade submetida a exame. Para tanto, foram analisados os processos para obtenção de licenças de instalação e de operação de empreendimentos turísticos de três grupos econômicos, detentores das maiores áreas de lavra de águas termais, submetidos à Secretaria Municipal de Meio Ambiente e Recursos Hídricos (SEMMARH) de Caldas Novas (GO), identificando suas potencialidades e fragilidades sob os aspectos do atendimento aos preceitos legais, à acuidade técnica e operacional. As informações foram coletadas mediante vista dos processos referentes ao período compreendido entre fevereiro de 2013 a junho de 2018. Concluiu-se que as decisões são de caráter mais político que técnico, sem levar em consideração as necessárias análises técnicas das implicações das atividades potencialmente poluidoras, impedindo a formulação de condicionantes ambientais eficazes para alcançar a sustentabilidade do turismo em Caldas Novas (GO).

Palavras-chave: gestão ambiental; recursos hídricos; impacto ambiental.

INTRODUCTION

This article discusses environmental licensing as a public management tool to implement the sustainable development principle. In this scenario, this article aims to analyze the environmental licensing (EL) conducted in the municipality of Caldas Novas (GO), considering the premises established in art. 10 of Resolution no. 237/97 of the National Council for the Environment (CONAMA), from the perspective of sustainable development, prevention, and precaution principles. To this end, the article was structured in three parts: the first deals with the importance of EL as a management tool; the second reports the results obtained in the data collection at the Municipal Secretariat of Environment and Water Resources (SEMMARH) and the analysis of compliance with the premises of art. 10 of Resolution no. 237/97 of CONAMA; the third presents the conclusions.

In this way, an empirical, qualitative, exploratory research in Law was conducted, applying a hypothetical-deductive methodology of data obtained through legislative, bibliographic, and documentary research. A literary review was conducted, complemented by searches in articles and relevant legislation, which allowed to build an overview of the Brazilian legislation on EL, defining competences for issuing licenses. From then on, the framework of tourist activity that exploits thermal waters was verified in the criteria that define competence for issuing installation (IL) and operating (OL) licenses.

Subsequently, the EL processes of the enterprises of the three main economic groups that hold the largest areas of hot springs mining in the municipality of Caldas Novas (GO) filed between February 2013 and June 2018 were analyzed, identifying flaws in the procedure practiced by the SEMMARH for issuing IL and OL for tourist resorts exploring thermal waters.

1 THE IMPORTANCE OF ENVIRONMENTAL LICENSING AS A MANAGEMENT TOOL

Currently, there is a review of the development model that was driven by the modernization started in the 18th century, with the Enlightenment thought, responsible for establishing a new innovative vocation to modern man whose mission is to “break with the shackles of tradition, must transform everything and everyone (Faustian man), tirelessly, to satisfy

their desires and enrich the nation” (BRITO; RIBEIRO, 2002, p. 148). This paradigm shift established new relationships between men and their relationship with nature. What has happened today is the dismantling of this “civilizing project of modernity, criticisms converge on a main point, which are the unintentional effects caused by the rationalization process whose negative or dangerous consequences affect both the environment and men themselves” (BRITO; RIBEIRO, 2002, p. 148).

This also implies changes in legal-administrative relations. The propagation of the sustainability idea ceases to have a binary character, in which the balance of public and private interests was observed to acquire a multipolar facet, in which several fundamental rights, such as the rights to property, to free enterprise, to maintenance of the healthy environment, are in conflict and must be considered, trying to reach a fair balance (GUANABARA, 2013). Thus, despite the discretion of administrative acts,

[...] administrative decisions must value a minimum of rationality in the appreciation and weighting of facts with a view to reaching an effective environmental protection. After all, when ecological interests are not properly considered, there is a risk of tending to favor only economic interests (GUANABARA, 2013, p. 27-28).

The constitutionalization of the Environmental Rule of Law brought constitutional protection of the environment, not only in Chapter IV, which refers to the Environment, but in a series of other provisions that relate its preservation in a holistic, systemic, and intergenerational way. As it is a time of crisis and uncertainties, what is perceived in practice is a difficulty for the government to introject sustainability into its rules and decisions. This is especially due to the interdisciplinary complexity of the environmental theme that imposes the necessary reformulation of legal epistemology, of the State and, consequently, of legal hermeneutics (BELCHIOR, 2011).

In this context, to assist in the examination of the value of the several types of legal norm, it is necessary, including for interpreters of Law, to

[...] evaluate the form of relationship between man and the environment and seek a harmonious coexistence, so that an ecological pre-understanding is possible, capable of changing values, thinking, attitude, the way this symbiosis occurs. This can only be possible with the overcoming of modernity, given that it is characterized by logocentrism and anthropocentric egalitarianism (BELCHIOR, 2011, p. 116-117).

Thus, the EL has been one of the important instruments for consolidating environmental public policies adopted by the National Environmental Policy (PNMA), with the aim of achieving sustainable economic and social development, which can contribute to mitigating the impacts caused directly or indirectly to the environment from the tourist activity, through the establishment of a “monitoring plan, that is, a description of the procedures that will be adopted when implementing, operating and deactivating the enterprise” (SÁNCHEZ, 2013, p. 381). This author concludes that both the mitigating measures and the monitoring plan

[...] have in common the fact that they refer to measures that will have to be taken in the future if the project is approved; normally, the actions proposed and described in environmental studies become a commitment by the entrepreneur or mandatory conditions imposed by the regulatory agent (licenser) (SÁNCHEZ, 2013, p. 381).

To define the competence, attention must be paid to the typology defined by Resolution no. 2/2016 of the State Council for the Environment (CEMAM; GOIÁS, 2016) which attributes to the accredited municipalities for meeting the requirements imposed by Complementary Law no. 140/2011 (BRAZIL, 2011b) and State Law no. 20,742/2020 (GOIÁS, 2020a), as is the case of Caldas Novas (GO), the management of the entire process, issue of licenses, and inspection of environmental conditions.

Through the EL process, the person interested in conducting an activity or setting up an enterprise, listed in regulations as a potentially pollutant, can obtain an environmental license to be issued by the competent body after fulfilling legal requirements, among which we can mention the development of Environmental Impact Assessment Studies (EIA) by the entrepreneur.

It is verified, therefore, that the EL must play a decisive role in solving the problems faced to allow social evolution, mitigating environmental degradation from economic activity. It is an administrative procedure by which the competent environmental agency licenses the location, installation, expansion and operation of undertakings and activities that use environmental resources, considered effectively or potentially polluting, or those that, in any way, may cause environmental degradation, considering the legal and regulatory provisions and technical standards applicable to the case (BRASIL, 1997). Therefore, EL is

[...] the essential legal instrument to reconcile the environment and sustainable local economic and social development, given that the issue of the environmental license by the competent body is linked to compliance with conditions, restrictions

and environmental control measures that must be obeyed by entrepreneurs to locate, install, expand and operate enterprises or activities that use environmental resources and are considered potentially environmentally-polluting (BRASIL, 1997).

Granzieira (2009) understands that the EL is an instrument for the manifestation of Police Power, functioning as a mechanism for controlling and restricting human activity, based on the principles of prevention and supremacy of public interest. The author also clarifies that it is an administrative procedure used to make economic and social development compatible with preservation of environmental quality and ecological balance, establishing criteria and standards of environmental quality, norms for use and management of natural resources.

According to Wedy (2019, p. 17), the EL, according to the decision of the Federal Supreme Court (STF, Plenum, ADI 1505/SC, Rel. Min. Eros Grau, 11/24/2004a),

[...] represents one of the forms of performance of police power, within the competence of the Executive Power, which is why it was considered an unconstitutional precept of the State Constitution that submits the Environmental Impact Report to scrutiny of the Legislative Assembly⁵.

Effectively, it is up to the Executive branch, through this procedure, 'in advance, to decide on the socio-environmental feasibility and sustainability of a particular work or activity project that impacts nature' (WEDY, 2019, p. 17). However, 'in case of granting a license, the Government must impose conditions on the exercise of economic activity and monitor compliance with the determinations' (WEDY, 2019, p. 17-18). That is, in practice, the inspection and monitoring of economic activities should take place permanently, starting with the introduction of the EL process, granting of the installation license, operating licenses and renewal of environmental licenses.

Wedy (2019) warns that environmental license cannot be confused with environmental licensing. The latter is an administrative process arising from the exercise of police power by members of public administration who have administrative competence to inspect potentially-polluting activities. The environmental license is the aim to be achieved through environmental licensing. The author claims that every

Environmental Licensing accompanied by the environmental impact study, when applicable, portrays one of the most important instruments of environmental regulation and management, as well as the respective police power, given its preventive and precautionary vocation. It also embodies the principles of polluter payer, sustainability, and the socio-environmental function of the property (WEDY, 2019, p. 16).

Therefore, the environmental impact study, within the licensing process of activities that are potentially polluting and/or use natural resources, is important for the licensing body's decision-making. Thus, as Sadler (1996, p. 14) points out,

[...] a review of recent experience around the world suggests four required ingredients for effective application of Environmental Assessment: I – appropriate time to start the assessment, so that the proposal is reviewed early enough to allow for development of reasonable alternatives; II – clear and specific directions in the form of terms of reference or guidelines, covering priority issues, timelines and opportunities for information and suggestions in the main stages of decision making; III – quality information and products promoted by compliance with procedural guidelines and use of “best practices”; and IV – receptivity of decision makers and proponents to EA results, based on good communication and accountability.

2 ANALYSIS OF ENVIRONMENTAL LICENSING PROCEDURES FOR TOURIST ENTERPRISES USING THERMAL WATER IN CALDAS NOVAS (GO)

In response to the query made by e-mail to the Municipal Secretariat for the Environment and Water Resources (SEMMARH) of Caldas Novas (GO), it is observed that, in the period from February 2013 to June 2018, there was a sharp growth in the number of licensing (municipal environmental license for installation – IL and operation – OL) granted by SEMMARH (Table 1).

Table 1. Number of environmental installation (IL) and operating (OL) licenses issued annually by SEMMARH of Caldas Novas (GO) between 2013 and 2018

Year	2013	2014	2015	2016	2017	2018
Number	4	34	72	165	248	311

Source: Caldas Novas (2018b).

Of the total number of licenses granted, 92 were intended for licensing of tourist activities exploring thermal waters, and in Caldas Novas (GO) there were already 230 enterprises in this field of activity (CALDAS NOVAS; 2018b).

Subsequently, 12 processes belonging to the three main economic groups holding the largest areas of hot springs mining in the municipality were analyzed (Di Roma Group = 24.93 km²; Lagoa Quente Group = 0.22 km²; Privé Group = 1.29 km²) according to National Mining Agency (ANM) data (BRAZIL, 2020).

The selected processes were those filed between 2013, when there was decentralization of environmental licensing to the municipality of Caldas Novas (GO), and 2018, when data were collected at SEMMARH (Table 2).

Table 2. List of licensed enterprises and their respective National Register of Legal Entities (CNPJ) by economic group, between 2013 and 2018 in Caldas Novas (GO)

CNPJ	Enterprise	Group
13.532.936/0001-05	Condomínio Residencial Diroma Exclusive	Di Roma
19.010.450/0001-93	Condomínio Residencial L'acqua Diroma – I	Di Roma
19.949.402/0001-65	Condomínio Residencial L'acqua Diroma – II	Di Roma
18.732.863/0001-19	Condomínio Residencial L'acqua Diroma – III	Di Roma
22.036.659/0001-30	Condomínio Residencial L'acqua Diroma IV	Di Roma
24.305.644/0001-56	Condomínio Residencial L'acqua Diroma V	Di Roma
07.350.562/0001-04	Condomínio Villas Diroma Residence	Di Roma
08.922.496/0001-62	Condomínio Residencial Diroma Fiori	Di Roma
00.071.557/0001-13	Condomínio Residencial Império Romano Residence	Di Roma
01.346.360/0001-02	Hotel e Restaurante Roma	Di Roma
14,584,799/0001-15	Condomínio Lagoa Quente Flat Hotel	Lagoa
23,722,685/0001-85	Atrium Thermas Residence Service	Privé

Source: Caldas Novas (2018b).

Art. 10 of Resolution no. 237/97 of CONAMA (BRASIL, 1997) provides for the steps that the environmental licensing procedure must follow. An attempt was made, through filing, to identify the criteria used by SEMMARH to assess requests in accordance with the provisions of the aforementioned article, specifically as regards the analysis of the activity's potential for environmental intervention, the resilience of the environment in the area of direct influence, and the compatibility between the observed degradation and the mitigating conditions proposed.

2.1 Framing the activity to be licensed

Pursuant to Resolution no. 1/86 of CONAMA (BRASIL, 1986), specifically in its art. 2, environment-modifying activities must be previously licensed by the competent environmental agency. Resolution no. 237/97 defines potentially polluting activity, in its art. 2 as any one in which “the

location, construction, installation, expansion, modification and operation of undertakings and activities that use environmental resources considered effectively or potentially polluting, as well as undertakings capable, in any form, of causing environmental degradation” (BRAZIL, 1997).

It is understood that resolution no. 1/86 refers to undertakings and activities that use natural resources and are considered effectively or potentially polluting, which may cause environmental degradation. On the other hand, Law no. 6,938/81, the PNMA, in its art. 10, refers to establishments and activities that use natural resources and environmental degradation: “The construction, installation, expansion and operation of establishments and activities that use environmental resources, effectively or potentially polluting or capable, in any way, of causing environmental degradation will depend on prior Environmental Licensing” (BRASIL, 1981).

Item V of art. 3 of Law no. 6,938/81 (PNMA) defines natural resources as “the atmosphere, inland, surface and underground waters, estuaries, the territorial sea, soil, subsoil, elements of the biosphere, fauna and flora” (BRASIL, 1981). To define what degradation is, item. II of the aforementioned article states that it is “the adverse change in the characteristics of the environment” (BRASIL, 1981) and asserts that, if this degradation comes from activities that, in one way or another, harm the population’s health, safety and well-being, that create conditions that are incompatible with social and economic activities, that damage the biota and the environment’s aesthetic or sanitary conditions or that dump materials or energy in disagreement with established environmental standards, such degradation becomes pollution.

Based on these legal premises, it can be concluded that any significant modification of the environment, whether by an individual or legal entity, under public or private law, resulting from a productive or profitable activity, must be considered a potentially polluting activity subject to environmental licensing.

Given the abstraction and the high number of activities that fit the aforementioned concept, it is concluded that it is impossible to issue an exhaustive norm that lists all cases susceptible to environmental licensing. Therefore, to prevent the subjectivity of those responsible for analyzing potentially-polluting activities from exempting the licensing requirement, Resolution no. 237/97 of CONAMA (BRASIL, 1997) provides a generic and exemplary list of mandatory requirements, including “tourism – tourist and leisure complexes, including theme parks and racetracks”, an item of

interest to the present study.

From the activities listed by the resolution of the federal advisory body of the National Environment System (SISNAMA), it is up to the states and municipalities, in accordance with provisions of art. 6, §§ 1 and 2 of the PNMA (BRAZIL, 1981), to develop complementary rules according to the specificities of potentially-polluting activities carried out in their territories.

Also, to classify an activity as subject to environmental licensing, what must be considered is not the way man interacts with nature, but the impact that his actions can cause to the environment, because

[...] hotels use natural resources, which are also used by any company and all individuals, the use of these resources, such as water, food, for example, represents a significant environmental impact. Thus, the idea that hotels do not impact the environment is a distorted view of reality. Not to mention the environmental impacts resulting from garbage that is generated in these places, from equipment and products of daily use that harm the environment, from liquid effluents, which are released into rivers and seas mixed with detergents and other organic waste, and so many other aspects (ABREU, 2001, p. 13).

In this way, all tourist enterprises operating in Caldas Novas (GO) need the Environmental Licensing and this

[...] does not exclude or replace other authorizations necessary for a given undertaking to be implemented and performed. Art. 10, §1, of Resolution no. 237/9761 requires not only that the project maintains compatibility with land use and occupation, governed by municipal legislation, but also that, if applicable, it has authorization for suppressing vegetation and grants for use of water, issued by competent bodies. Thus, the granting of environmental license does not eliminate the need to obtain, for example, the granting of water resources by the competent authority, *ex vi* art. 12 of Law no. 9,433/97, or authorization for mineral exploration (WEDY, 2019, p. 18-19).

The indispensability of environmental licensing for tourist activities is an incontrovertible fact. However, the definition of potential environmental impacts arising from it is not peaceful. In the case of thermal aquifers in the region of Caldas Novas (GO), in March 2000, a technical report on thermal aquifers' protection areas in the region of Caldas Novas and Rio Quente was carried out (HAESBAERT; COSTA, 2000b), which defined the areas of vulnerability for aquifers protection, based on the precepts of Ordinance no. 231/98 of the National Department of Mineral Production (DNPM) (BRASIL, 1998) and Hirata's vulnerability assessment propositions (1993).

In the aforementioned report, it was pointed out that two factors directly affect the degree of vulnerability of the exploited natural resource: the exploitation of underground thermal water in a volume greater than the recharge rate of aquifers and the possibility of contamination of these, because of uncontrolled human activity. It is underlined that, in general, all aquifers are vulnerable to mobile and persistent contaminants and that the less vulnerable aquifers, that is, those that are not easily contaminated, once their degradation occurs, are less susceptible to restoration of water quality.

The consolidation of tourist activity in Caldas Novas (GO) has concentrated hot springs in areas of high population density. Thus, it is possible to observe the junction of two important aspects that exert pressure on the environment, namely, the production of large amounts of contaminating waste which, due to the inefficiency of municipal management to meet the demand for basic sanitation, are subject to percolation of rainwater and, consequently, due to the peculiar characteristics of the city's geological aspects (natural occurrence of rocky massif very fractured laterally and vertically). This, together with the drilling of wells that do not meet technical specifications of Ordinance 374/2009 of the DNPM (BRASIL, 2009), can contaminate the Paranoá aquifer, whose resilience capacity is lower, due to the geological characteristics mentioned above, demonstrating its high vulnerability. Similarly, the Araxá aquifer, despite being overlaid by clayey soil and, therefore, having the ability to delay the flow, dilute pollutants and even attenuate their effects in central areas, is exposed to these polluting agents persistently and for long, also presenting great vulnerability. The decrease in the aquifers' potentiometric level due to excessive exploitation reduces the aquifers' pressure, facilitating downward flow of polluted surface waters (HAESBAERT; COSTA, 2000a).

However, "it is not an easy task to specify the concept of significant degradation" (MILARÉ, 2007, p. 369). Often, the insignificant takes on the greatest significance, as occurs, for example, when "a certain project has exactly the power to break the environmental saturation point of a certain area. In this case, evidently, its impact cannot be considered insignificant, no matter how small" (MILARÉ, 2007, p. 369).

According to Sánchez (2013, p. 125), to define significance, "the pressure exerted by the activity or enterprise on the environment and its vulnerability must be observed. The greater the pressure and vulnerability, the greater, too, the potential for impact".

Based on these aspects, the municipality's areas were classified according to the level of vulnerability for groundwater sources:

[...] the Serra de Caldas constitutes the main element of the hydrogeological context to be protected; due to the high vulnerability presented, however, with a minimal risk of contamination if the current conditions of use and occupation persist. [...]. respectively, the accelerated urbanization process observed in Caldas Novas contributes to the fact that the contamination risks are considered high [...] mainly the Caldas stream and the Açude stream. The local classification of contamination risk from high to very high depends on the existence and type of commercial activities, such as gas stations, car washes, dry cleaners, mechanic shops and others. Deficiencies of the official sanitary sewage system and the existence of old tubular wells with constructive deficiencies deserve to be particularly mentioned to classify these areas as of increasing risk (HAESBAERT; COSTA, 2000b, p. 247/248).

Thus, despite the fact that tourist resorts that use thermal waters in Caldas Novas (GO) are expressly not part of the positive list of activities of significant environmental degradation, presented by Resolution no. 1/86 of CONAMA (BRAZIL, 1986), based on the initial environmental assessment raised (HAESBAERT; COSTA, 2000b), it appears that, although there is no prohibition, according to the city's urban zoning law (Municipal Law no. 3.078/2019; CALDAS NOVAS, 2019a), the occurrence of significant negative environmental impacts was evidenced.

In this sense, according to the screening criteria for environmental impact assessment proposed by Sánchez (2013, p. 137), "its licensing must be preceded by an Environmental Impact Study – Environmental Impact Report (EIA-RIMA)".

Even though the argument presented above is not enough to conclude for classifying tourist developments in Caldas Novas (GO), due to their specificity, as activities with significant potential for environmental degradation, it is possible, using the legal-environmental hermeneutics and the precautionary principle, to understand that tourist resorts using thermal waters in Caldas Novas (GO) fit into the hypothesis of item. XV of Resolution no. 1/86 of CONAMA (BRAZIL, 1986). This item mentions that urban projects, in areas considered of relevant environmental interest, at the discretion of state or municipal bodies, will depend on the preparation of an environmental impact study (EIA) and the respective environmental impact report (RIMA) for obtaining environmental licenses and, in accordance with Municipal Law no. 3088/2019, the environmental importance of the thermal water table was expressly recognized, and its sustainable

tourist exploitation was determined (art. 78; CALDAS NOVAS, 2019b), thus characterizing its relevant environmental interest.

It should also be added that the aquifers exploitation, to meet the demand of tourist complexes to provide tourists attractions, is a predominant factor in the degradation of this natural resource. It should be noted that the allegation of lack of regulation by the State of Goiás on the EIA-RIMA cannot be used as a means of evading the power-duty of demanding an environmental impact study when, as in this case, there is an imminent risk of significant deterioration of its environmental quality (MILARÉ, 2007).

In a similar case, of conflict of administrative competence between the federal and state environmental agency, the STJ, in the judgment of the leading case, represented by Resp. 588.022 – SC⁵ (STJ, Primeira Turma, REsp 588.022/SC, Rel. Ministro José Delgado, 17/02/2004b), the jurisprudential interpretation defined was that, when there are technical differences regarding the classification of an activity as significantly degrading or not, in view of the precautionary principle, the requirement to carry out the EIA and the issue of the respective RIMA is necessary, since the possibility of significant degradation and not the degradation itself, is what justifies the requirement of the study in question (FARIAS, 2007).

Every enterprise is the result of the act of undertaking that explores any branch of industry, commerce, and services. It is, therefore, a broad, abstract concept encompassing any human activity designed to promote a business activity. In the case of tourist enterprises, according to the glossary of IBAMA's Normative Instruction no. 12, of April 13, 2018 (BRASIL, 2018), a tourist and leisure complex is “the set of contiguous facilities and coordinated services for the exercise of tourist and leisure activities,

5 ADMINISTRATIVE AND ENVIRONMENTAL. PUBLIC CIVIL ACTION. DRAINAGE OF THE ITAJAÍ-AÇU RIVER. LICENSING. IBAMA COMPETENCE. NATIONAL INTEREST. 1. There are activities and works that will be important both for the Nation and for the States and, in this case, there may even be duplication of licensing. 2. The confrontation between the right to development and the principles of environmental law must be resolved in favor of the latter, given its purpose of preserving the quality of human life on the face of the earth. Its central objective is to protect heritage belonging to present and future generations. 3. The discussion about whether the Itajai-Açu River is a state or federal river is not worth mentioning. Environmental conservation is not limited to geographical situations or historical references, going beyond the limits imposed by man. Nature knows no political boundaries. Environmental goods are transnational. The concern that motivates the present case is not only the river, but mainly the territorial sea affected. The impact will be considerable on the marine ecosystem, which will receive millions of tons of debris. 4. The entire coastal zone and the territorial sea are directly affected by the dredging works of the Itajai-Açu River, requiring the participation of IBAMA and the need for prior EIA/RIMA. The activity of the state agency, *in casu*, FATMA, is supplementary. Only the study and in-depth monitoring of the issue, through public and private environmental agencies, will be able to assess the contours of the impact caused by dredging in the river, by the deposit of debris in the sea, as well as on the sea currents, on the shore coast, on the mangroves, on the beaches, and, finally, on the men who live and depend on the river, the sea and the mangrove in this region. 5. Special Appeal denied.

including or not means of accommodation”. It also conceptualizes resort as being “the tourist complex that is characterized by a hotel with leisure and entertainment infrastructure that has aesthetic services, physical activities, recreation and conviviality with nature in the enterprise itself (Referring to MTur Ordinance no. 100 /2011, article 7, II; BRASIL, 2011a)”.

Considering that all tourist resorts in Caldas Novas (GO) that use thermal waters, necessarily, have facilities for accommodation and hot springs park in a hydrothermal resort or aquatic theme park that uses thermal water sources in a hydrothermal resort and provide coordinated services for the exercise of tourist and leisure activities, it is concluded that they fit into the concept of “tourist complex” activity.

To obtain the license for a potentially-polluting enterprise or activity, the interested party must direct their request to the competent environmental agency to issue the license. To comply with the provisions of art. 8, I, of Federal Law no. 6,938/81 (BRASIL, 1981), CONAMA Resolution no. 237/1997 (BRAZIL, 1997) establishes, in its arts. 4 to 6, the criteria for defining the body responsible for licensing, depending on the characteristics of potentially-polluting activities.

Although the PNMA law dates from 1981 (BRASIL, 1981) and Resolution no. 237 having been edited by CONAMA in 1997 (BRASIL, 1997), it was only in 2011 that Complementary Law no. 140 (BRASIL, 2011b) was published, which sets the rules for cooperation between federative entities in administrative actions arising from the exercise of common competence regarding protection of remarkable natural landscapes, protection of the environment, the fight against pollution in any of its forms, and the preservation of forests, fauna and flora.

As already clarified, at the time of the decentralization of administrative competence for environmental licensing to the Municipality of Caldas Novas (GO), through CEMAM Resolution no. 9, of February 22, 2013 (GOIÁS, 2013), CEMAM Resolution no. 4/2011 (GOIÁS, 2011) was in force, which provided for the criteria for municipal decentralization. Currently, Resolution no. 2/2016 (GOIÁS, 2016) is in force. The minimum formal requirements for decentralization were listed in art. 2 of Resolution no. 4/2011 and were reissued, with minor changes, in art. 12 of resolution no. 2/2016. However, the potentially-polluting activities that require environmental licensing listed in the aforementioned resolutions underwent changes with relevant consequences (Table 3).

Table 3. Potentially-polluting activities

CEMAM Resolution	Code	Activity	Unit	Limit size	Pollution potential
no. 4/2011	30.05	Hotels and similar businesses	-	All	Medium
	30.06	Sports, recreational, tourist or leisure facilities (water park, fish and pay lake, clubs, among others)	Useful area (ha)	≤1.0	Medium
no. 2/2016	31.03	Hotels and similar businesses	-	All	Low
	31.04	Sports, recreational, tourist or leisure facilities (water park, fish and pay lake, clubs, among others)	Total area (ha)	≤ 100	Medium
	31.05	Tourist and hotel complex	Total area (ha)	≤ 100	High

Source: Goiás (2011; 2016).

As already stated, activities dependent on EIA-RIMA cannot be the object of decentralization of competence to the municipality. For this reason, the “tourist complexes”, despite being included in the list of Annex I, of Resolution no. 2/2016 of CEMAM (GOIÁS, 2016) of potentially-polluting activities, obtaining the environmental license should, in theory, be preceded by completion of an EIA-RIMA and maintained under the rule and analysis of the State Secretariat for the Environment and Development (SEMAD), as expressly provided in art. 3, § 2, of the aforementioned resolution (GOIÁS, 2016), given that such activities can be decentralized to the municipal environmental licensing bodies, as they are classified as high potentially polluting activities.

As for the projects that are the object of study, they fit perfectly to the concept of “tourist complex”, as the main economic groups in Caldas Novas (GO) are made up of housing units for exclusive use of guests, theme parks, restaurants, boutiques to buy souvenirs, among many other services and amenities offered to tourists. However, as observed in the survey conducted in the respective environmental licensing processes, all undertakings and activities comprising the analyzed business groups were not submitted to the environmental license procedure in a global way. It was found that they were dismembered and classified as “condominium with swimming pool” and “hotel with swimming pool”, although this typology is not included in the sole annex of Resolution no. 2/2016 of CEMAM

(GOIÁS, 2016), circumventing the ownership of the license, which should be carried out in accordance with the legislation then in force, by SEMAD, after carrying out an EIA-RIMA.

2.2 Dissonance of the terms of reference with the guidelines of Municipal Law no. 1,519/2007 of the city of Caldas Novas (GO)

SEMMARH's terms of reference were edited in accordance with its Ordinance no. 3/2018 (CALDAS NOVAS, 2018a). According to Resolution no. 1/86 of CONAMA (BRASIL, 1986), used as a theoretical reference for environmental studies, whatever they may be, they must contain the minimum information necessary to enable the correct technical analysis of the licensing body (article 6) when issuing the conclusive opinion. In the aforementioned resolution, it is defined that the diagnosis of the area of influence of the project must be presented, pointing out the physical, biotic, and anthropic environments that may be affected. It determines that impacts must be analyzed in their magnitude and importance, classifying them as negative or positive, as well as the extent of their effects, whether direct or indirect, considering the time for the impact to manifest, being immediate, in the medium and long term, as well as the time that the impact acts in the area in which it manifests itself, ranging from temporary to permanent.

It is also necessary to present proposals for the change imposed on the environment due to the implementation and operation of the enterprise, either mitigating measures, when aimed at preventing negative impacts or reducing their magnitude, or potentiating measures, when referring to positive impacts and the respective programs of follow-up and monitoring. According to Leopold *et al.* (1971), when dealing with environmental impacts, two terms must be considered: (i) defining the impact's magnitude in specific sectors of the environment, which is used in the sense of degree, extent or scale; and (ii) weighting the degree of importance (i.e., significance) of the action, in particular, on the environmental factor in the specific instance under analysis.

For tourist resorts that use thermal waters, in the case of a prior license (PL) request, SEMMARH required the applicant to present a Prior Environmental Report of the project implementation area, a study that was suppressed in the current term of reference.

For the installation license (IL), consent of the body responsible

for the public sanitation service was required, in this case the Municipal Department of Water and Sewage (DEMAE), specifically for liquid effluents release into the public sewage system (Declaration of standards for release – DPL), and the granting of water use or exemption issued by the competent body, Environmental Management Plan (PGA) also including the Environmental Education Plan (PEA) and the Solid Waste Management Plan (PGRS) with Note of Technical Responsibility (ART) for the preparation of these, IL or project of the ETE and/or ETA with Descriptive Memorandum and ART of the person in charge on behalf of the enterprise, sketch of location and access to the place, providing the geographic coordinates, a project of the entire enterprise, a hydro-sanitary project, which includes the treatment system of the swimming pools of the aquatic park, both with ART registered with the Regional Council of Engineering and Agronomy of Goiás (CREA-GO), in the name of the enterprise. Also, an environmental license for the thermal water well or contract with a duly licensed mining company, proof of compliance with the conditions imposed by the Public Ministry of Goiás in the Conduct Adjustment Term no. 42/1999, of the signatory projects and, finally, a building permit issued by the Municipality of Caldas Novas (GO).

Currently, in the reference term for IL, the Enterprise Characterization Memorial (MCE) and Environmental Control Plan (PCA) are requested, covering liquid and solid waste treatment, atmospheric emissions, noise, vibrations, and other environmental liabilities, in addition to a Solid Waste Management and Civil Construction Plan. Despite transferring the MCE to a phase prior to the OL, the PEA, the presentation of IL or the ETE and/or ETA project, as well as the fulfillment of the conditions imposed in the Conduct Adjustment Term (TAC) were suppressed.

In order to obtain the operating license (OL), in addition to a copy of the IL, if requested separately, and the respective report on compliance with the conditions, the MCE certificate, the Floor Plan of the enterprise, the PCA, which encompasses liquid and solid waste treatment, atmospheric emissions, noise, vibrations and other environmental liabilities, the PEA, all with ART, and the Conformity Certificate issued by the Military Fire Department of the State of Goiás are required.

At first, the nomenclature used in the terms of reference appears to be in disagreement with the guidelines of Municipal Law no. 1,519/2007, in its art. 37, Item III (CALDAS NOVAS, 2007), it determines that the environmental impact assessment, for activities that do not require EIA-RIMA,

must be preceded by the preparation of an Environmental Management Program (EMP). Furthermore, the terms of reference do not even mention the requirements set out in art. 39 of Municipal Law no. 1,519/2007 (CALDAS NOVAS, 2007), determining that the PGA must:

consider all appropriate technological alternatives and alternatives for the location of the enterprise, confronting them with the hypothesis of non-execution of it; (ii) define the limits of the area directly and indirectly affected by the impacts; [...] (iv) systematically identify and assess the environmental impacts that will be generated by the enterprise in all phases of planning, research, installation, operation or use of environmental resources;

[...] (vi) define measures for impacts as well as measures to enhance positive impacts resulting from the enterprise; and (vii) Develop a follow-up and monitoring program for positive impacts, indicating the frequency, factors, and parameters to be considered, which must be measurable and have unambiguous interpretations.

It is noteworthy that, for the permanent execution of the PEA, SEM-MARH should have a mixed Internal Commission for Environmental Education, under the coordination of a specialized education professional, for the development of permanent actions of environmental education with servers, entrepreneurs, collaborators of the tourist enterprises and also with the tourists themselves in order to give effect to the plans presented.

After granting the OL, within 30 days, the Operating Permits for the current year, issued by the Municipality of Caldas Novas (GO), and the Municipal Health Surveillance are required.

The Municipal Environment Secretariat proceeds according to the Control Listing Method (checklist). The environmental assessment, in accordance with the Terms of Reference and study models available on the website, and must

[...] briefly inform all the impacts to be generated by the enterprise from the implementation, operation, and closure of activities, in the area of direct (100m) and indirect (200m) influence of the enterprise. Include in this information all support locations, such as: workshops, fuel storage and supply, equipment washing, warehouses, etc. (CALDAS NOVAS, 2018b).

The area of direct and indirect influence of the enterprise is fixed, without any scientific criteria, at 100 and 200 meters, respectively. According to Menin *et al.* (2017), “area of influence” is the term that designates the geographic limits in which impacts occur, develop, and affect the components of the physical, biotic, and socioeconomic environments. In the Terms of Reference under analysis, the criteria used to establish the

projects' areas of study and influence are not found, making it impossible to understand how the proposed limits were reached, especially when the limits correspond to fixed bands along the enterprise's layout, not being possible to identify the relationship of the different components of the physical, biotic and socioeconomic environments for their determination (MENIN *et al.*, 2017).

The area of direct influence is the one subject to the direct impacts arising from the implementation and operation of the tourist complex according to the affected environment (biotic, physical, and anthropic). Pursuant to State Law no. 20,694/2019 (GOIÁS, 2019), they are those directly used by the enterprise, including those intended for installing the necessary infrastructure for its implementation and operation, or those that had their function changed to house the enterprise targeted by the environmental licensing, that is, the area of direct influence cannot be determined by means of a value fixed by SEMMARH, it must be determined from an analysis of the documentation required for the purpose of obtaining a license.

The area of indirect influence covers the place where the environment is indirectly affected. In this way, the definition of areas must be made in each specific case and must necessarily be based on the characteristics and vulnerabilities of natural environments and social realities, including the area that may suffer alteration in the quality of surface waters and aquifers and soil contamination, migratory flow of labor and economic influence, due to the implementation and operation of licensed activities. The state law, which regulates the general rules for environmental licensing in Goiás, defines this area as the one that suffers the direct and indirect environmental impacts of the construction, installation, expansion and operation of an activity or enterprise.

From the results obtained, it can be concluded that dismembering the same enterprise is not recommended and appropriate, since this makes the integrated assessment of environmental feasibility difficult, as it causes deficiencies in integrating the definition of the study areas, assessing impacts, delimiting areas of influence and proposing environmental measures, actions, and programs (MENIN *et al.*, 2017). It should be noted that State Law no. 20,694/2019 (GOIÁS, 2019) also provides for the possibility of conducting environmental licensing for a set of enterprises that are part of tourist centers (art. 5, II, State Law no. 20,694/2019).

As stated in the PCA's term of reference, the environmental diagnosis is made through a brief characterization of local geology, vegetation

typology with specification of legally protected species, if any, in the area, information on water bodies, naming the hydrographic basin and the microbasin where the water body responsible for rainwater drainage is located, as well as the most frequent fauna species and human interventions in the area of indirect influence (deforestation, interventions in permanent preservation areas, atmospheric emissions, effluents releases into the soil or in water bodies, mechanical soil movement, waste disposal, etc.).

The relevance of public policy mechanisms to encourage environmental improvement efforts, among which environmental licensing stands out, has been empirically confirmed by studies. For a proactive business posture of innovation for environmental improvement,

[...] regulation is important to drive such innovations. This is due to a number of reasons, such as: pressure on companies to generate innovations; improvement of environmental quality; warnings to companies about inefficient use of resources and the need for technological improvement; encouraging environmentally correct innovations; promoting competitive balance, ensuring that companies do not create a competitive advantage from actions that are aggressive to the environment (BÁNKUTI; BÁNKUTI, 2014, p. 175).

In this context, once again, we highlight the importance of the Terms of Reference for achieving sustainability. Legislation and tax incentive policies should not only stimulate economic growth, but also environmental competitiveness, “while ensuring the preservation and renewal of natural and heritage resources” (BANKUTI; BÁNKUTI, 2014, p. 171). Especially in economic activities related to tourism that exploit natural and cultural resources, environmental legislation and tax incentive policies should be applied as an environmental management strategy, establishing criteria and requirements for sustainable behavior and environmental conservation as requirements for granting environmental licenses. Access to subsidized lines of credit should also be conditioned to the certification of companies with sustainable development based on eco-efficiency principles (Triple Bottom⁶) which should be present in the objectives, goals, and action plan, arising from strategic planning of business organizations in the hotel tourism sector in Caldas Novas (GO).

As for the Solid Waste Management Plan, it differs from the PCA

⁶ “The Triple Bottom Line concept, which emerged from the study conducted by Elkington (1994), in English, is known as 3P (People, Planet and Profit); in Portuguese, it would be PPL (*Pessoas, Planeta e Lucro*). Analyzing them separately, we have: economic, whose purpose is the creation of viable ventures, attractive to investors; environmental, whose objective is to analyze the processes’ interaction with the environment without causing permanent damage; and social, which is concerned with the establishment of fair actions for workers, partners and society” (OLIVEIRA *et al.*, 2012, p. 73).

in item 4, in which solid waste produced by the activity is identified and classified, identifying the points of generation, inside and outside the production process, the classification and quantification of generated waste, in accordance with NBR 10004 (BRASIL, 2004) and Resolution no. 313/2002 of CONAMA (BRASIL, 2002), describing the methods of treatment and final disposal of hazardous waste and subject to special controls, instructed from the schematic plant of location, in the enterprise, of the points of generation, segregation, transport, packaging and final disposal.

The issue of water consumption and sewage production is summarized in the presentation of a DEMAÉ certificate, specifically for liquid effluents release into the public sewage system, in the Declaration of Standards for Release (DPL). The magnitude and significance of the increase in demand for services by the municipal authority are not quantified, given the already known inefficiency of service provision. In case the enterprise is in an area that does not have a sewage collection service, only the IL or the Sewage Treatment Station project was required.

It can be clearly seen that the environmental assessment studies determined by SEMMARH do not cover the characteristics of the proposed activity and the condition of the receiving environment in all aspects, given that the implications of licensed activities on health, safety and welfare of the population, social and economic activities and on the quality of the exploited environmental resource are not required. This prevents the analysis of the potential impact on the environment and, therefore, the presentation of alternative and effective mitigation measures, especially regarding those that directly affect the quality and level of thermal aquifers. A report should be presented of all human actions or activities arising from the project under licensing to enable the mapping of all possible causes of environmental changes (SANCHÉZ, 2013), especially regarding the volume of organic waste (non-recyclable) production, sewage and the need for potable water to meet the needs of the enterprise.

2.3 Environmental impact assessment

According to Sadler's (1996) methodology, the appropriate time to start environmental assessment is when formulating public environmental management programs to better determine environmental impacts and predict mitigating actions, called Strategic Environmental Assessment. That

is, an environmental impact study should be used to guide the Master Plan and the city's urban zoning legislation.

In Caldas Novas (GO), despite the existence of a Technical Report on the protection areas of thermal aquifers in the region of Caldas Novas and Rio Quente and of an EIA-RIMA, covering the entire hydrothermal complex existing until the year 2000 (HAESBAERT; COSTA, 2000b), the municipal environmental preservation laws were only enacted in 2007. Furthermore, the numerous legislative changes did not consider the points of environmental fragility that were pointed out in the aforementioned technical report, causing a legislative setback regarding environmental protection.

In the screening phase, the project under licensing must be included in a positive list of activities subject to environmental licensing. In the scope definition phase, the licensing agency, through Terms of Reference, establishes instructions for the preparation of environmental impact studies, considering the project's peculiarities and the area's environmental characteristics that, after being presented, if applicable, must be submitted for public consultation. Subsequently, the licensing agency issues a conclusive technical opinion on whether or not to grant the intended license, as well as establishing the environmental conditions to which the entrepreneur is bound. In the last phase, there will be follow-up and monitoring of the environmental impacts and the stipulated technical requirements.

In the case of Caldas Novas (GO), tourist resorts that use thermal waters, despite being included in the positive list of Resolution no. 2/2016 of CONAMA (BRASIL, 2016) as tourist complexes, continue to be licensed by the municipal environmental agency, despite the express claim of competence established by art. 3, II, so that they must comply with SEMMARH's Terms of Reference in order to obtain the licenses.

To provide an effective basis for the licensing agency's decision, environmental studies should, according to Leopold *et al.* (1971, p. 4), present

- a. A listing of the effects on the environment which would be caused by the proposed development, and an estimate of the magnitude of each.
- b. An evaluation of the importance of each of these, effects.
- c. The combining of magnitude and importance estimates in terms of a summary evaluation [...] It helps the planners to identify alternatives which might lessen impact.

In the specific case under study, in view of the causes pointed out by Haesbaert and Costa (2000b) as the main factors that directly affect the degree of vulnerability of thermal aquifers, are the exploitation of under-

ground thermal waters in a volume greater than the aquifers' recharge rate and the possibility of contamination of these, due to uncontrolled human activity, associated with poor provision and public sanitation services (supply of drinking water, sewage and garbage treatment). Thus, the Terms of Reference should necessarily quantify the projections of water consumption from aquifers for bathing, drinking water, production of domestic effluents and generation of solid and liquid waste, including the disposal of water from swimming pools to demonstrate the activity's increased pressure on the vulnerability of the environment. The absence of these variables makes it difficult to inspect tourist-hotel enterprises to mitigate environmental impacts.

It should be noted that the environmental impact study that was required by SEMMARH as a requirement for issuing an LP, that is, a preliminary environmental report, was supplied in the current TR issued to obtain it, which implies, in practice, that the licenses carried out by the environmental agency of Caldas Novas (GO) do not require environmental impact assessment studies prior to the installation of tourist resorts that use thermal waters.

In order to obtain the IL/OL, by means of a file on the required environmental impact studies, it was found that, in the PEA of the listed projects, 72.72% of them (CALDAS NOVAS, 2018b) have generic and unrealizable objectives and that, in their entirety, continuous environmental education actions are limited to meetings, lectures with employees, production of graphic material and installation of selective garbage collectors.

As for the PGA presented by the aforementioned projects, it was found that 72.72% of them have generic and unrealizable objectives and 100% do not make evident plans and innovative actions that can mitigate negative environmental impacts and promote sustainable development. There are 54.54% that presented recycling of paper, glass, and cans as actions for management of the solid waste produced. Only 45.45% make it clear that they reuse swimming pool water. All projects have a Water Treatment Station, however, 27.27% did not present water quality analysis for disposal.

It was demonstrated that the environmental impact studies presented do not meet the legal requirements (art. 39, Municipal Law n. 1.519/2007; CALDAS NOVAS, 2007), nor are they effective in determining the pressure exerted by the licensed activity on the environment.

2.4 Technical analysis and surveys

The first point to be highlighted is that, in SEMMARH's practice, there is no material analysis of the documents required in the terms of reference, regardless of which type of environmental license is being requested. What is seen in the daily practices of that body is a mere verification of formal compliance with the Terms of Reference requirements which, as highlighted, have weaknesses. According to Sánchez (2013), in decision-making by environmental licensing bodies, the criteria usually observed are the regulations in force in the jurisdiction in which the study was presented and the previously formulated terms of reference. However, the author points out that "if the terms of reference are bad or insufficient to determine the extent and scope of environmental studies, then their analysis will also be impaired, as formal aspects will be covered, but not the substantive ones" (SÁNCHEZ, 2013, pp. 444-445).

By the way, art. 5, Sole Paragraph, of Resolution no. 1/86 of CONAMA (BRASIL, 1986) provides that,

[...] when determining the execution of the environmental impact study, the competent state agency, or IBAMA or, when applicable, the Municipality, will establish the additional guidelines that, due to the project's peculiarities and the environmental characteristics of the area, are deemed necessary, including deadlines for completion and analysis of studies.

The scope of environmental impact studies, according to Sánchez (2013), should appraise the types of technological and location alternatives and, mainly, the content of the environmental diagnosis surveys for the licensed activity, also establishing the depth level of each survey required in the terms of reference and the corresponding analyses. That is, in the stage of preparing the Terms of Reference (TR), the necessary surveys must be defined, such as the extension of the study area, the methods used and many other parameters to guide the study that must be conducted by the proponent.

This is because, according to Barretto (2012, p. 44), "the TR is a guiding document that aims to ensure compliance not only with the general guidelines contained in the aforementioned Resolution, but, above all, with guidelines that deal with the project's specifics and the environmental characteristics and particularities".

In the specific case of tourist activities that use thermal waters, as in Caldas Novas (GO), therefore, the scope of environmental impact studies

required by SEMMARH should be established, taking into account the activity's entire area of influence, a legal requirement provided for in art. 5, III, of Resolution no. 1/86 of CONAMA (BRAZIL, 1986), suppressed in practice by the Environment Secretariat of Caldas Novas (GO):

III – Define the limits of the geographic area to be directly or indirectly affected by the impacts, called the project's area of influence, considering, in all cases, the hydrographic basin in which it is located.

Furthermore, due to the inefficiency of the terms of reference, which do not assess the increase in the demand for pumping the aquifers' thermal water wells, in the consumption of drinking water and in the production of sewage and garbage, not even the economic and social consequences of the installation and operation of enterprises (art. 1, Resolution n. 1/86 CONAMA; BRASIL, 1986), the analysis of the environmental impacts of tourist activity remains impaired.

In the specific case, according to the survey carried out with SEMMARH, during the study period, that is, from February 2013 to June 2018, 92 (ninety-two) requests were filed, all for installation/operation licenses, of which 12 belong to the business groups under study. From the analyses carried out on the sample of environmental licensing procedures surveyed, it was observed that the terms of reference used by the municipal environmental agency are too generic and do not even meet the minimum legal requirements established by CONAMA Resolution 1/86 (BRASIL, 1986), and Municipal Law no. 1,519/2007 (CALDAS NOVAS, 2007), even less to the specifics of the place.

The environmental conditions are the same for all licensed projects, reinforcing the thesis that the analysis of the environmental studies presented is made only by the checklist method.

2.5 Technical opinion and follow-up after obtaining IL/OL

The model established in Brazil assigns decision-making power to environmental agencies at all stages of the environmental licensing procedure. It is up to them to “determine which environmental study is necessary, establish their internal procedures (respecting the general rules established by the Federal Government) and their decision-making criteria” (SANCHEZ, 2013, p. 500).

Although the law and general principles of law impose limitations, the abstraction of environmental regulations and the frequent legal gaps

open up a very wide discretionary field in the making of these administrative decisions. Among the collected data, it was observed that, in fact, knowledge appropriation is “the most effective means of mastering nature and social control in modernity” (LEFF, 2015, p. 262). This appropriation “became the means to control and monopolize access to nature as a source of wealth, giving rise to a political economy of knowledge” (LEFF, 2015, p. 275-276), to the exact extent that society, most of it, alienated from knowledge, cannot interfere in political decisions, as they do not have the technical knowledge to exercise an instrumental control over the quality of impact assessment studies and demand changes in the norms that regulate the aspects that will be observed when issuing the final opinion.

It is noticed that the deficiency of the terms of reference for issuing the licenses under analysis covers the real impacts that tourist activities have on the environment in the municipality of Caldas Novas (GO), allowing the prevalence of entrepreneurs’ interests over the effective sustainability of the local economy.

Thus, the decisions of the municipal environmental agency cannot be classified as technical, precisely because of the procedure’s lack of technicality, as regulated, being characterized as a political decision, based on economic rationalism, privileging short-term benefits over long-term costs, without considering future generations’ rights to a dignified life (PEARCE, 1983).

It was found, from the environmental licensing processes consulted at SEMMARH in Caldas Novas (GO), that the conclusive technical opinion for all projects is basically the same (2016024256, pages 235/236; 2016024252, pages 167/168; 2016024243, pages 166/167; 2016024242, pages 166/167; 2016024239, pages 181/182; 2017028159, p. 75; 2016024257, pages 219/220; 2016024260, pages 243/244; 2016024263, pages 242/243; 2016024232, pages 264/265; 2015058863, pages 161/162, and 2016059920, pages 162/163). In them, the entrepreneurs and the licensed enterprises’ characteristics are identified. In view of this, only the hydrographic basin in which it is inserted, the licensed activity, according to the typology established by SEMMARH, and the total area of the land and the corresponding built area are highlighted.

As for the technical requirements, they are generic and do not refer to the data collected in the technical studies of environmental assessment presented by the proponents. Monitoring and inspection activities are carried out through self-monitoring of the projects and presentation of periodic unilateral reports, of the mitigating measures listed in the conclusive

opinion, namely, presenting, on a quarterly basis, an analysis of the quality of treated water (reused in the project) according to the parameters established in Ordinance of the Ministry of Health no. 2,914/11 (BRASIL, 2011c), delivering, by March 31 of each year, the Waste Management Report (RGR) of the previous year, and attaching all waste disposal certificates in order to collaborate with the control and inspection procedures, and annually holding courses and lectures aimed at environmental education, involving the participation of employees and outsourced workers, with a goal of at least 90% of those involved, presenting a frequency list at SEMMARH, with no evidence, in the processes analyzed, of carrying out inspection activities *in loco*.

The follow-up stage, according to Sánchez (2013, p. 512), is crucial for the environmental licensing process to perform its role satisfactorily and has the following functions:

[...] ensure the implementation of the commitments assumed by the entrepreneur (described in the environmental studies and in the environmental licenses); adapt the project or its management programs in the event of unforeseen impacts or impacts of greater than expected magnitudes; demonstrate compliance with these commitments and the achievement of certain objectives and goals (such as meeting legal requirements); provide elements for improving the EIA process, identifying problems from previous steps.

After obtaining the IL/OL, theoretically, inspection and monitoring of the environmental conditions contained in the technical report should be carried out periodically. However, in practice, given the way in which the Environmental Management Plans, Solid Waste Management and Environmental Education Plans are presented, with superficial and useless content for mitigating the main negative impacts of tourism in Caldas Novas (GO), the evaluation and the report are impaired, and the “inspection” is only documental, in the checklist phase of the documentation presented. According to a query conducted and answered by email by SEMMARH, after the licenses are granted and during their validity period, on-site inspections only take place in case of possible notification of divergences. What we have, therefore, is not a problem of legislation, but of its effective observance and enforcement.

CONCLUSION

Municipal autonomy, guaranteed by CF/88, translated, in theory, into a significant advance in environmental management. This is because, in

the case of activities that imply reflections on local environmental resources, the Municipalities are the competent entities to legislate and implement policies to safeguard the environment, which would bring the licensing procedure closer to local environmental specificities.

In Caldas Novas (GO), the municipal body that is part of SISNAMA, SEMMARH, edited Ordinance no. 3/2008 (CALDAS NOVAS, 2008) which regulates municipal environmental licensing processes. Similarly, it edited Terms of Reference to guide such procedures according to the activity to be licensed and the license to be obtained.

The phases of obtaining licenses under study, IL and OL for tourist activities using thermal waters meet the generic dictates established in art. 10, of Resolution no. 237/97 of CONAMA (BRASIL, 1997), and the Terms of Reference bring the list of documents that must be presented when opening the environmental licensing process which, once presented, must be sent for analysis and issue of an opinion by the licensing body without public hearing.

However, the problems that were verified start in the phase of framing potentially-polluting activities and, consequently, in defining the competence of the licensing body. CEMAM Resolution no. 2/2016 (GOIÁS, 2016) establishes the activities that can be licensed by municipalities. These are listed in the single annex, among which item 31.5 stands out, which brings the activity “tourist and hotel complex”, classifying it as of high polluting potential, so that, in accordance with the provisions of art. 3, § 2, it should be licensed before the state agency, especially since it has been proven that tourist activities that use thermal waters have a significant environmental impact on the environment, due to the vulnerability of the environment, according to studies by Haesbaert and Costa (2000b), and should therefore be preceded by EIA-RIMA. Also corroborating the understanding that the activity under study causes a significant environmental impact, using legal-environmental hermeneutics and the precautionary principle, it is imperative to understand that tourist enterprises, users of thermal waters in Caldas Novas (GO), conform to the hypothesis of Item XV of Resolution no. 1/86 of CONAMA (BRASIL, 1986), which mentions urban projects in areas considered of relevant environmental interest, at the competent municipal bodies’ discretion, mainly because art. 78 of Municipal Law no. 3.088/2019 (CALDAS NOVAS, 2019b) expressly recognizes the environmental importance of the thermal aquifer, and its sustainable tourist exploitation is determined. CEMAM Resolution no.

2/2016 (GOIÁS, 2016), as is currently done before SEMMARH, does not allow dividing the enterprise for the purpose of mischaracterizing the tourist complexes and modifying the administrative competence of the licensing. This interpretation was consolidated with the addition of Ordinary State Law 20, no. 20.694/2019 (GOIÁS, 2019), which provides for environmental licensing processes in the State of Goiás, regulated by Decree n. 9,710/2020 (GOIÁS, 2020b), in which, in its single annex, it is observed that tourist complexes and hotel developments in areas of well-known environmental, ecological or tourist interest due to landscape or preservation were classified as activities with high polluting potential.

Another deficiency worth mentioning is the content of the Terms of Reference. It can be clearly seen that the environmental assessment studies required by SEMMARH do not consider the proposed activity's characteristics and the receiving environment's condition, especially regarding environmental bottlenecks that most imply degradation of thermal aquifers, namely, organic solid waste and sewage produced by tourism and the need for potable water to meet the enterprises' demand. As a result of the flaw in the TRs, the assessment of environmental impacts remains hampered, as the required documents do not provide adequate information related to the pressures on the natural environment, conducted by tourist enterprises that use thermal waters.

In a chain reaction, the technical analyses are merely formal, through a checklist of documents required in the Terms of Reference without carrying out inspections or analysis of their content, only documentary verification. Therefore, there is no immersion in the data presented, especially because the documents presented do not provide sufficient elements for an adequate investigation of the environmental degradation caused, even less, of the efficiency of the mitigating measures proposed.

In the procedure adopted by SEMMARH, public participation was waived, since, as already mentioned, the projects are dismembered to disqualify the activity as having a significant polluting potential, removing the competence of SEMAD and the preparation of EIA-RIMA to obtain environmental licenses.

In view of all the flaws pointed out, which go back to the beginning of the process, its conclusion could not be different. The technical opinions are superficial and generic, applied uniformly to all enterprises that are framed in the same licensed activity and for obtaining the same licenses. This fact reinforces the understanding that decisions are more political than

technical, since they meet the municipal executive's determinations committed to encouraging economic growth at any cost without considering the necessary technical analyses of the implications of potentially-polluting activities, preventing the formulation of effective environmental conditions to achieve the sustainability of the economic activity under study.

The present study shows that it is not enough just to have an environmental legislation that envisages sustainable development if there is not a paradigm shift in the bodies that execute it. It is also not enough to establish fiscal incentive policies with a view to a green economy if the enterprises are not committed or are completely unaware of the principles of sustainable management committed to eco-efficiency, which also applies to public administration, which defends and encourages economic growth, at any cost, with the aim of increasing revenues, generating jobs, and expanding the demographics of cities. Public managers should be committed to social and environmental justice. Also regarding environmental management, the granting of subsidies and tax incentives should aim in the same direction, and not encourage the concentration of wealth, the increase in inequality and, consequently, irreversible environmental impacts or with great costs to the future generations' quality of life and, therefore, to the public coffers to mitigate their effects.

REFERENCES

ABNT – ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS. *NBR 10.004: Resíduos sólidos. Classificação*. Rio de Janeiro: ABNT, 2004.

ABREU, D. *Os ilustres hóspedes verdes*. Salvador: Casa da Qualidade, 2001.

BÁNKUTI, S. M. S; BÁNKUTI, F. I. Gestão ambiental e estratégia empresarial: um estudo em uma empresa de cosméticos no Brasil. *Gestão & Produção*, São Carlos, v. 21, n. 1, p. 171-184, 2014. Available from: <https://www.scielo.br/j/gp/a/Yxw3nmZqQk4vkvdxBbwtbYr/?lang=pt>. Access on: Apr. 07, 2019.

BARRETTO, F. R. M. *Análise da etapa de delimitação do escopo em processos de avaliação de impacto ambiental no estado de São Paulo*. 2012. Dissertação (Mestrado em Ciências da Engenharia Ambiental) – Escola de Engenharia de São Carlos, Universidade de São Paulo, São Carlos, 2012.

BELCHIOR, G. P. N. *Hermenêutica jurídica ambiental*. São Paulo: Saraiva, 2011.

BRASIL. Supremo Tribunal Federal (Pleno). *Ação Direta de Inconstitucionalidade 1505/ES*, Ação Direta de Inconstitucionalidade. Art. 187 da Constituição do Estado do Espírito Santo. Relatório de Impacto Ambiental. Aprovação pela Assembleia Legislativa. Vício material. Afronta aos artigos 58, §2º e 225, §1º, da Constituição do Brasil. Requerente: Confederação Nacional da Indústria – CNI. Requerido: Assembleia Legislativa do Estado do Espírito Santo. Relator: Min. Eros Grau, 24 de novembro de 2004a. Available from: <https://jurisprudencia.stf.jus.br/pages/search/sjur11940/false>. Access on: Dec. 15, 2019.

BRASIL. Superior Tribunal de Justiça (Primeira Turma). *Recurso Especial 588022/SC*. Administrativo e Ambiental. Ação civil pública. Desassoreamento do Rio Itajaí-Açu. Licenciamento. Competência do Ibama. Interesse Nacional. Recorrente: Superintendência do Porto de Itajaí. Fundação do Meio Ambiente – FATMA. Recorrido: Ministério Público Federal. Relator: Min. José Delgado, 17 de fevereiro de 2004b. Available from: [https://scon.stj.jus.br/SCON/pesquisar.jsp?i=1&b=ACOR&livre=\(\(%27RESP%27.clas.+e+@num=%27588022%27\)+ou+\(%27REsp%27+adj+%27588022%27\).suc.\)&thesaurus=JURIDICO&fr=veja](https://scon.stj.jus.br/SCON/pesquisar.jsp?i=1&b=ACOR&livre=((%27RESP%27.clas.+e+@num=%27588022%27)+ou+(%27REsp%27+adj+%27588022%27).suc.)&thesaurus=JURIDICO&fr=veja). Access on: Aug. 17, 2020.

BRASIL. Agência Nacional de Mineração. *Processos minerários ativos – GO – KMZ*. Available from: https://app.anm.gov.br/dadosabertos/SIG-MINE/PROCESSOS_MINERARIOS/GO.kmz. Access on: Feb. 10, 2020.

BRASIL. *Lei n. 6.938, de 31 de agosto de 1981*. Dispõe sobre a Política Nacional do Meio Ambiente, seus fins e mecanismos de formulação e aplicação, e dá outras providências. Available from: http://www.planalto.gov.br/ccivil_03/leis/l6938.htm. Access on: May 05, 2018.

BRASIL. *Resolução CONAMA n. 001, de 23 de janeiro de 1986*. Dispõe sobre critérios básicos e diretrizes gerais para a avaliação de impacto ambiental. Available from: <http://conama.mma.gov.br/atos-normativos-sistema>. Access on: May 05, 2018.

BRASIL. *Resolução CONAMA n. 237, de 22 de dezembro de 1997*. Regula os aspectos de licenciamento ambiental estabelecidos na Política Nacional do Meio Ambiente. Available from: <http://conama.mma.gov.br/atos-normativos-sistema>. Access on: May 05, 2018.

BRASIL. *Portaria DNPM n. 231, de 31 de julho de 1998*. Regulamenta as Áreas de Proteção das fontes de Águas Minerais. Available from: https://www.dnpm-pe.gov.br/Legisla/Port_231_98.htm. Access on: May 05, 2018.

BRASIL. *Resolução CONAMA n. 313, de 29 de outubro de 2002*. Dispõe sobre o Inventário Nacional de Resíduos Sólidos Industriais. Available from: https://incaper.es.gov.br/Media/incaper/PDF/legislacao_biosolido/resolconama313_.pdf. Access on: May 05, 2018.

BRASIL. *Portaria DNPM n. 374, de 1º de outubro de 2009*. Aprova a Norma Técnica que dispõe sobre as Especificações Técnicas para o Aproveitamento de água mineral, termal, gasosa, potável de mesa, destinadas ao envase, ou como ingrediente para o preparo de bebidas em geral ou ainda destinada para fins balneários, em todo o território nacional, revoga a Portaria n. 222 de 28 de julho de 1997, publicada no D.O.U. de 08 de agosto de 1997 e dá outras providências. Available from: https://www.dnpm-pe.gov.br/Legisla/Port_374_09.htm. Access on: May 05, 2018.

BRASIL. *Portaria Ministério do Turismo n. 100, de 16 de junho de 2011a*. Institui o Sistema Brasileiro de Classificação de Meios de Hospedagem (SBClass), estabelece os critérios de classificação destes, cria o Conselho Técnico Nacional de Classificação de Meios de Hospedagem (CTClass) e dá outras providências. Available from: <https://www.gov.br/turismo/pt-br/centrais-de-conteudo-/publicacoes/portarias-arquivos/portaria-2011/POR-TARIA-N-100c-DE-16-DE-JUNHO-DE-2011>. Access on: Sep. 08, 2020.

BRASIL. *Lei Complementar n. 140, de 08 de dezembro de 2011b*. Fixa normas, nos termos dos incisos III, VI e VII do caput e do parágrafo único do art. 23 da Constituição Federal, para a cooperação entre a União, os Estados, o Distrito Federal e os Municípios nas ações administrativas decorrentes do exercício da competência comum relativas à proteção das paisagens naturais notáveis, à proteção do meio ambiente, ao combate à poluição em qualquer de suas formas e à preservação das florestas, da fauna e da flora; e altera a Lei no 6.938, de 31 de agosto de 1981. Available from: http://www.planalto.gov.br/ccivil_03/leis/lcp/lcp140.htm Access on: Oct. 27, 2019.

BRASIL. *Portaria do Ministério da Saúde n. 2.914, de 12 de dezembro de 2011c*. Dispõe sobre os procedimentos de controle e de vigilância da qualidade da água para consumo humano e seu padrão de potabilidade.

Available from: https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2011/prt2914_12_12_2011.html. Access on: Oct. 27, 2019.

BRASIL. *Instrução Normativa IBAMA n. 12, de 13 de abril de 2018*. Institui o Regulamento de Enquadramento de pessoas físicas e jurídicas no Cadastro Técnico Federal de Atividades Potencialmente Poluidoras e Utilizadoras de Recursos Ambientais. Available from: <http://www.ibama.gov.br/phocadownload/ctf/2018/Ibama-IN-12-2018.pdf>. Access on: Sep. 08, 2020.

BRITO, D. C.; RIBEIRO, T. G. A modernização na era das incertezas: crise e desafios da teoria social. *Ambiente & Sociedade*, São Paulo, v. 5, n. 2, ago./dez. 2002.

CALDAS NOVAS. *Lei Municipal n. 1.519/2007, de 21 de novembro de 2007*. Institui o Código Municipal de Meio Ambiente e dispõe sobre o Sistema Municipal do Meio Ambiente – SISMA, para a administração do uso dos recursos ambientais, proteção da qualidade do meio ambiente, do controle das fontes poluidoras e da ordenação do solo do território do Município de Caldas Novas, de forma a garantir o desenvolvimento ambientalmente sustentável. Available from: <https://leis.camaradecaldas.go.gov.br/wp-content/uploads/2018/02/Lei-Municipal-1.519-2007.pdf>. Access on: Aug. 10, 2020.

CALDAS NOVAS. *Portaria SEMMARH n. 3 de 2018a*. Dispõe sobre o procedimento dos processos administrativos de pedido de Licenciamento Ambiental que tramitam na Secretaria Municipal de Meio Ambiente e Recursos Hídricos de Caldas Novas – SEMMARH. Available from: <http://www.semmarhcaldasnovas.com.br/wp-content/uploads/2018/07/Portaria-003.2018-regulamenta%C3%A7%C3%A3o-procedimento-Licen%C3%A7a-Ambiental.pdf>. Access on: Dec. 02, 2019.

CALDAS NOVAS. Secretaria Municipal de Meio Ambiente e Recursos Hídricos de Caldas Novas. 2018b. Available from: <http://www.semmarhcaldasnovas.com.br/termos-de-referencia-novo/>. Access on: Feb. 02, 2018.

CALDAS NOVAS. *Lei Municipal n. 3.078 de 09 de dezembro de 2019a*. Institui a revisão do Código de Zoneamento e Uso do Solo Urbano do Município de Caldas Novas e confere outras providências. Available from: <https://leis.camaradecaldas.go.gov.br/wp-content/uploads/2020/01/Lei-Municipal-3.078-2019.pdf>. Access on: Aug. 10, 2020.

CALDAS NOVAS. *Lei Municipal n. 3.088, de 12 de dezembro de 2019b*. Institui a Política Urbana e Ambiental e o Plano Diretor do Município de Caldas Novas e suas diretrizes, revoga a Lei n. 1.829 de 30 de dezembro de 2011 e confere outras providências. Available from: <http://www.camaradecaldas.go.gov.br/wp-content/uploads/2020/01/Lei-Municipal-3.088-2019-Pol%C3%ADtica-Urbana-e-Ambiental.pdf>. Access on: Aug. 10, 2020.

FARIAS, T. *Direito ambiental: tópicos especiais*. João Pessoa: Editora da Universidade Federal da Paraíba, 2007.

GOIÁS. *Resolução CEMAM n. 4, de 19 de outubro de 2011*. Dispõe sobre os critérios para a Descentralização do Licenciamento Ambiental, Criação da Corte de Conciliação de Descentralização e dá outras providências. Available from: https://www.meioambiente.go.gov.br/images/imagens_migradas/upload/arquivos/2016-07/resolucao-04_2011.pdf. Access on: Mar. 23, 2019.

GOIÁS. *Resolução CEMAM n. 9, de 22 de fevereiro de 2013*. Dispõe sobre o credenciamento das Prefeituras Municipais de Caldas Novas e Pontalina para o desempenho do licenciamento ambiental e dá outras providências. Available from: https://www.meioambiente.go.gov.br/images/imagens_migradas/upload/arquivos/2015-10/resolucao-no_09_2013.pdf. Access on: Mar. 23, 2019.

GOIÁS. *Resolução CEMAM n. 2 de julho de 2016*. Estabelece a lista de atividades de impacto ambiental local no âmbito do Estado de Goiás, dispõe sobre o credenciamento de Municípios para o licenciamento ambiental de atividades de impacto local, regulamenta a instauração de competência estadual supletiva, dispõe sobre a Corte de Conciliação de Descentralização e dá outras providências. Available from: <http://www.sgc.goias.gov.br/upload/arquivos/2016-08/02---atividades-de-baixo-impacto-descentralizacao.pdf>. Access on: Mar. 23, 2019.

GOIÁS. *Lei Estadual n. 20.694, de 26 de dezembro de 2019*. Dispõe sobre normas gerais para o Licenciamento Ambiental do Estado de Goiás e dá outras providências. Available from: https://legisla.casacivil.go.gov.br/pesquisa_legislacao/100893/lei-20694. Access on: May 29, 2020.

GOIÁS. *Lei Estadual n. 20.742, de 17 de janeiro de 2020a*. Dispõe sobre o credenciamento de municípios para as atividades de licenciamento e

fiscalização ambiental. Available from: <https://legisla.casacivil.go.gov.br/api/v2/pesquisa/legislacoes/100965/pdf>. Access on: Aug. 23, 2021.

GOIÁS. *Decreto n. 9.710, de 03 de setembro de 2020b*. Regulamenta, no âmbito do Poder Executivo Estadual, a Lei Estadual n. 20.694, de 26 de dezembro de 2019, que dispõe sobre as normas gerais para o Licenciamento Ambiental no Estado de Goiás e dá outras providências. Available from: https://legisla.casacivil.go.gov.br/pesquisa_legislacao/103356/decreto-9710. Access on: 23 ago. 2021.

GUANABARA, D. A. C. *O problema da localização de aterros de resíduos sólidos: um olhar do direito sobre a discricionariedade administrativa, a ponderação de interesses e a participação pública*. Salvador: Juspodivm, 2013.

HAESBAERT, F. F.; COSTA, J. F. G. *Geologia e hidrologia da região de Caldas Novas: adequação à Portaria 231 do DNPM. Relatório Técnico GEOCENTER/GEOCALDAS*. Caldas Novas, 2000a.

HAESBAERT, F. F.; COSTA, J. F. G. *Relatório técnico de áreas de proteção dos aquíferos termais da região de Caldas Novas e Rio Quente*. CPRM – GEOCALDAS. Caldas Novas, 2000b.

HIRATA, R. C. A. Os recursos hídricos subterrâneos e as novas exigências ambientais. *Revista do Instituto Geológico*, São Paulo, v. 14, n. 2, p. 36-62, jul./dez., 1993.

LEFF, H. *O saber ambiental: sustentabilidade, racionalidade, complexidade, poder*. 11. ed. Petrópolis: Vozes, 2015.

LEOPOLD, L. B. *et al. A procedure for evaluating environmental impact*. Washington, DC: Geological Survey Circular 645, 1971.

MENIN, F. A. *et al. Critérios de delimitação de áreas de influência em Estudos de Impacto Ambiental de rodovias: abordagem de processos de dinâmica superficial*. *Geol. USP, Sér. Cient.*, São Paulo, v. 17, n. 3, p. 209-224, 2017.

MILARÉ, É. *Reação jurídica à danosidade ambiental: contribuição para o delineamento de um microsistema de responsabilidade*. Tese (Doutorado em Direito) – Pontifícia Universidade Católica de São Paulo, São Paulo, 2016.

PEARCE, D. Accounting for the future. In: O'RIORDAN, T.; TURNER, R. K. (org.) *An annotated reader in environmental planning and management*. Oxford: Pergamon Press, 1983. p. 117-122.

PORTER, M.; VAN DER LINDE, C. Verde e competitivo: acabando com o impasse. In: PORTER, M. *Competição: estratégias competitivas essenciais*. Rio de Janeiro: Campus, 1999. p. 371-397.

SADLER, B. *International study of the effectiveness of environmental assessment: final report: environmental assessment in a changing world: evaluating practice to improve performance*. Gatineau: Minister of Supply and Services Canada, 1996. Available from: <https://unece.org/DAM/env/eia/documents/StudyEffectivenessEA.pdf>. Access on: Feb. 02, 2018.

SÁNCHEZ, L. E. *Avaliação de impacto ambiental: conceitos e métodos*. 2. ed. São Paulo: Oficina de Textos, 2013.

WEDY, G. *Texto apresentado na audiência pública do Grupo de Trabalho destinado a analisar o marco legal concernente ao Licenciamento Ambiental brasileiro e apresentar propostas quanto ao seu aperfeiçoamento*. Destinatário: Câmara dos Deputados, 4 jul. 2019. Available from: <https://www2.camara.leg.br/atividade-legislativa/comissoes/grupos-de-trabalho/56a-legislatura/licenciamento-ambiental/documentos/manifestacoes-recebidas/2019-06-29-gabriel-wedy-manifestacao-por-escrito>. Access on: Dec. 09, 2019.

Article received on: 08/31/2021.

Article accepted on: 08/18/2022.

How to cite this article (ABNT):

OLIVEIRA, H. A.; PALMERSTON, S. C. E.; TEJERINA-GARRO, F. L. Environmental licensing of tourist enterprises using thermal waters in Caldas Novas (GO): a mechanism or a constraint to sustainability? *Veredas do Direito*, Belo Horizonte, v. 19, n. 44, p. 357-392, may/aug. 2022. Available from: <http://www.domhelder.edu.br/revista/index.php/veredas/article/view/2224>. Access on: Month. day, year.