



PERCEPTIONS AND WILLINGNESS OF BRAZILIAN FEDERAL DISTRICT FARMERS REGARDING PAYMENT FOR USE OF WATER RESOURCES

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Abstract: Although it has already started in some states, charging for the use of water resources is not yet widespread in Brazil. The aim of this research was to know the perceptions and willingness of farmers in relation to payment for the use of water resources, to make it feasible to collect this fee, introduced by Law No. 9,433, of 1997–Brazilian National Policy of Water Resources (PNRH). In this context, we sought to obtain this knowledge through qualitative research and a semi-structured survey applied to 37 farmers from five hydrographic basins in the Brazilian Federal District. The results, using Iramuteq software, showed the lack of motivation to pay for use of water resources, but also made it clear that the negative situational motivation can be modified if the State intervenes to meet both demands for information and questions raised, in order to bring their motivations, attitudes and sustainable behaviors to light.

Keywords: Charge; iramuteq; motivation; sustainable consumption; water use.

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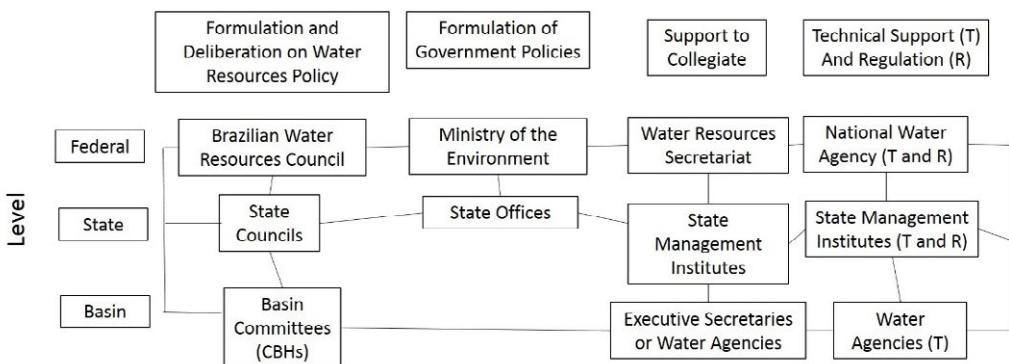
Introduction

The use of water resources subject to granting is one of the management tools introduced by the Brazilian National Water Resources Policy – PNRH (BRAZIL, 1997), and it is considered one of the most effective economic measures in regions where scarcity of water resources requires a balance between supply and demand (BORSOI; TORRES, 1997; GRABHER; BROCHI; LAHÓZ, 2003). According to the Brazilian Water Agency (ANA) (ANA, 2010), collection of a fee would stimulate the rational use of water resources, due to the scarcity of this natural resource in relation to its quantity and quality, since it begins to have an economic value.

According to Law nº 9,433 (BRAZIL, 1997) the objectives of this instrument are to recognize water as an economic good and give the user an indication of its real value; to encourage the rationalization of water use and to obtain resources to finance the programs and interventions included in water resource plans, and not to increase the income of the State (DIAS; BARROS; SOUZA, 2010), besides acting as an agent to induce participatory action. The value of the fee and the application of the resources obtained will be established by the Hydrographic Basin Committee (CBH), a management council formed by multiple actors (BRAZIL, 1997).

The Hydrographic Basin Committees (CBHs) were created by the PNRH. They are collegiate bodies, with normative, deliberative and advisory attributions, where multiple actors deliberate jointly on the water priorities of a given watershed (ABERS, 2010). The CBH is the competent body to establish the mechanisms for charging for the use of water resources and to suggest the amounts to be charged. These new deliberative spaces aim to bring the decision-making process closer to the population that will be directly affected by it, away from centralized bureaucracies (ABERS; KECK, 2004). Figure 1 shows the entities of the Brazilian water resources management system.

Figure 1 - Institutional matrix of the national water resources management system



Source: Adapted from ANA, 2021.

Deliberative spaces are expected to play the role of “schools of democracy,” where individuals may develop political skills, mature politically by gaining trust, become aware

of their interests as well as the interests of people participating in the same process, developing as citizens (BARBER, 2003) and acquiring cooperative behavior, which would be the most appropriate behavior as a long-term survival strategy (PENNISI, 2005). Participating in these forums is an essential activity for the farmers.

The charge is configured as a process of agreement between the various users of water resources in the scope of the hydrographic basin committees (CBHs). This process is based on the fact that the charge is molded from positive and negative experiences arising from practice, bringing limitations of a political and socioeconomic nature that predominate over technical and environmental dimensions, which makes it difficult to apply this instrument (ACSELRAD; AZEVEDO; FORMIGA-JOHNSSON, 2015). However, there is no way to talk about collecting a fee without seeing the payment, and there is no way to think of payment without analyzing the behavior, attitudes, perceptions, intentions and beliefs of human beings. According to Rokeach (1981), beliefs are inferences about states of basic expectations of individuals, and may or may not represent what these individuals believe, since there are compelling conscious and unconscious social or personal reasons that influence people and prevent them from verbalizing what they are thinking. The study of human attitudes and motivations in order to understand how individuals value environmental goods is considered fundamental by Pahl-Wostl et al. (2008), since human attitudes and motivations are factors that will decide success or failure in the implementation of a water policy (DEVI et al., 2009). For this reason, according to these authors, it is essential to know what the reasons would be for people to pay for benefits from a particular policy or project before its implementation. Unfortunately, in Brazil, evaluations of intentions, perceptions and knowledge are not yet effectively applied before the implementation of legal instruments.

Socioeconomic, geographic and financial factors, among others, influence the collective attitudes regarding water resource management and conservation efforts (DEVI et al., 2009). However, collective human belief systems, attitudes, and behaviors are still not seen as integral parts of management (PAHL-WOSTL et al., 2008), which impairs policy or project implementation. According to Mills et al. (2017), the understanding of farmers' motivations to undertake environmental activities can help in the development of advice and information strategies to optimize environmental management and the framing of specific messages for the adoption of specific practices.

In Brazil, several CBHs have started to implement charges for the use of water resources, especially those related to the Federal rivers, but only six Brazilian states have implemented the charge, while the others, including the FD, are still deliberating and deciding on how to start this process (OCDE, 2017).

The Brazilian Federal District (FD) is located in the mid-western region of the country. It occupies a region of springs, where the water bodies present low flow rates (DF, 2017). The dry season occurs between the months of May and August (CAPODE-FERRO et al., 2018). It is the federative unit of the country with the third lowest water availability per inhabitant in Brazil (ADASA, 2018). In recent years, the FD has seen sharp population growth, both in urban and rural areas (IBGE, 2017a).

Agriculture is an important economic activity in the Federal District. Approximately 40% of its area is occupied by agricultural crops and cultivated pasture (IBGE, 2917b; CODEPLAN, 2017). In 2017, this sector grew 15.7%. Linked to this growth, irrigated agriculture was the activity that most presented an increase in demand for the region's water consumption due to the large investments made by the private sector and the incorporation of new areas suitable for irrigation (FAO, 2017; CODEPLAN, 2018), which generated an increase in the intensive use of water resources.

There are several studies that model the reasons for sustainable behavior based on an explanation about values, attitudes and intentions. Some of these studies investigate the role of education (ZSÓKA et al., 2013, CINCERA; KRAJHANZL, 2013), the institutional context (VELASCO; HARDER, 2014, FUDGE; PETERS, 2011), environmental communication (BREMERS; HAVERKAMP; OMTA, 2009) and knowledge of sustainable practices (REDMAN; REDMAN, 2013), and all showed the importance of actions in environmental education in modifying or overcoming individual barriers, supporting sustainable behavior and facilitating the integration between public management and private interest.

Thus, the objective of this research is to know more about the rural situation in the Brazilian Federal District (FD), looking for the perceptions and the motivations that could influence the willingness of farmers to pay or not pay for the use of water resources, with the purpose of assisting in the implementation of a charge for the use of water resources in the FD.

Material and Methods

The Approach to Rational Action (ARA) admits that human beings are rational and use the available information, evaluating the implications of their behaviors in order to decide for their realization (AJZEN; FISHBEIN, 1970).

This approach was the theoretical model used in this study as a basis to assess the perceptions and motivations of rural producers for payment for the use of water resources. From a theoretical point of view, payment for water use is a dependent variable that is influenced by three independent variables: personal motivation (attitude), social perception (normative perception) and situational motivation (perception of control) (FISHBEIN; AJZEN, 2010).

The ARA advocates that questions formulated using the terms "advantages and disadvantages" suggest responses related to behavioral beliefs. The use of the terms "supportive/supportive persons/institutions" elicit responses related to normative beliefs, and the terms "ease and difficulty" suggest responses related to control beliefs, according to Rodrigues et al. (2016).

A survey based on the theoretical model of the ARA, by Fishbein and Ajzen (2010), was composed of 27 questions. The issues were constructed and grouped into four thematic blocks: (1) introductory, related to the characterization of the area; (2) knowledge, related to the management of water resources and the environment; (3)

motivational, related to the payment for the use of water resources (personal, social and situational motivation), and (4) demographic and social questions. Motivational questions (13 to 18) are presented in Chart 1.

Chart 1 – Questions from the survey related to perceptions and motivations

Motivation
Personal motivation (behavioral beliefs)
13. In your opinion, what are the advantages of paying for water use in agriculture? (<i>earnings and benefits</i>)
14. From your point of view, what are the disadvantages of paying for water use in agriculture? (<i>losses and damage</i>)
Social motivation (normative beliefs)
15. From the point of view of friendship, which person or institution would support / approve of your paying for the use of water in agriculture?
16. From a technical point of view, which person or institution would support / approve of your paying for the use of water in agriculture?
Situational motivation (control beliefs)
17. In your opinion, what could make it easier for you to pay for water use in agriculture? (<i>external strengths and opportunities</i>)
18. From your point of view, what could make it difficult for you to pay for the use of water in agriculture? (<i>weaknesses and threats from the external environment</i>)

Source: prepared by the authors

Thirty-seven farmers participated in this study, and their properties are included in the following watersheds of the FD: Descoberto, Maranhão, Paranoá, Rio Preto and São Bartolomeu. The participants were selected through lists provided by the Federal District Technical Assistance and Extension Company (EMATER/DF), by leaders of rural associations and from suggestions made by farmers already interviewed. There was no discrimination or selection based on property size or water consumption.

As a qualitative study, the criterion of selection of the sample was the saturation of beliefs, that is, the data collection was performed until the participants' responses began to repeat themselves.

The project was approved by the Committee of Ethics in Research with Human Beings of the University Center of Brasília (UniCEUB), under evaluation nº 1,754,322, and all the participants signed the Term of Free and Informed Consent.

Data collection

Based on the saturation of beliefs, the survey was applied individually as an interview to 37 farmers from 5 hydrographic regions of the Brazilian Federal District. The interviews were conducted directly on the properties or in the offices of participants after scheduling. With the farmers' permission, the interviews were recorded and later transcribed. This option was justified by the ease of data collection, volume and precision of the information and adjustments of the instrument, as well as being qualitative research. Initially, the researcher introduced herself, made the invitation and provided the instructions on the conduct of the interviews. After the invitation was accepted, the least possible intervention was made during the answers. The time used in the interviews ranged from twenty minutes to one and a half hours.

Data analysis

Textual analysis is a specific type of data analysis whose purpose is to analyze transcribed verbal material, such as originally written texts, documents, interviews, essays, among other sources, which are widely used in Human and Social Sciences (NASCIMENTO; MENANDRO, 2006). According to Duarte (2004), the use of software to analyze qualitative data is justified, as this gives a more organized and rigorous treatment to the material contained in semi-structured interviews, field diaries, video recordings, focus groups, etc.

Preliminarily, the interviews were transcribed in full as text in Word for Windows 2007. Data analysis was performed through the Excel computer program for analysis of the introductory blocks, knowledge, demographic and social questions and Iramuteq software (Interface for Multidimensional Routine Analyses of Texts and Questionnaires) (version 0.7, alpha 2), a free and open-source software developed by Pierre Ratinaud and licensed by the GNU GPL (v2), for the motivational block. The software allows the user to make statistical analyses of textual corpus and of tables of individuals / words using the R software (www.r-project.org) and Python (www.python.org), (CAMARGO; JUSTO, 2013a).

Among the various types of software available for the analysis of textual data, Iramuteq software was chosen because it met the objective sought by the research, in addition to being free and having been made available to researchers.

The software works with the data collected in the interviews using the descending hierarchical classification (DHC). In DHC, the text segments (TS) are classified according to their respective vocabularies and their set is divided on the basis of the frequency of the reduced forms (words that have already been lemmatized, that is, they have already been deflected, according to Salviatti (2017), with the purpose of determining their lemma. For example, the words *cat*, *cats* are all forms of the same lemma: *cat*. Iramuteq has its own rules of lemmatization. The verbs are converted to the infinitive, the nouns to the singular and the adjectives to the singular masculine. (The software performs the lemmatization from the dictionaries, without disambiguation). Each interview is called text. The objective of the analysis is to obtain, from the text, classes of units of text segments

(TS) that present at the same time vocabularies similar to each other and vocabularies different from the TS of the other classes. From DHC, Iramuteq presents the results in a different way, through a Factorial Correspondence Analysis (FCA), which represents in a Cartesian plane the different words and variables associated with each of the DHC classes, usually presented as a dendrogram. The interface provides a more qualitative analysis of the data by enabling the retrieval of text segments (TS) associated with each class in the original corpus (database used) and, consequently, highlights the statistically significant words (CAMARGO; JUSTO, 2013b).

Analysis plan

An analysis plan was programmed considering the following methodological steps: (1) data analysis in Excel; (2) preparation of the corpus; (3) Iramuteq software configuration; (4) implementation of the program; (5) presentation of the Iramuteq report. The textual database used, the corpus, was formed by the set of collected responses (respondents' discourse), derived from the variables used (interview script questions applied).

The textual database used (corpus) was formed by the responses given by the interviewees to the questions of the motivation block (questions 13 to 18) contained in the interview script, according to the Approach to Rational Action (ARA) by Fishbein and Ajzen (2010), the theoretical model used in this work as a basis to evaluate the perceptions and willingness of the farmers to pay for the use of water resources. For each of the 6 questions, the 6 responses given by the 37 interviewees to each one of them were grouped, and the command lines (lines with asterisks) were elaborated. Motivational research, with reference to questions 13 to 18, brought the following command lines, with this presentation (formed by four asterisks ****) que_vant (payment advantages – question 13, class 1); que_desv (payment disadvantages – question 14, class 2); amiz_apag (friends who support payment – question 15, class 3); tec_apag (technicians who support payment – question 16, class 4); facil_pagto (ease of payment – question 17, class 5); dific_pagto (difficulty of payment – question 18, class 6), that is, questions 13 to 18 gave rise to 6 command lines that in turn generated 6 classes.

Regarding the configuration of the software to be executed, it is summarized in the definition of the parameters that serve as the basis for the analysis to be performed. The standard program markings were used.

Results and discussion

Based on the socio-demographic data, the characteristics of the interviewees were identified. Regarding the age group, of the 37 respondents 11 are aged from 20-50 years and 2 are aged from 71-80 years. The age range of most farmers interviewed is concentrated from 51-60 years and 61-70 years, with twelve in each range. Many of the respondents who belong to this age group have been engaged in agricultural activity for more than 25 years, which shows great commitment to it.

In the research of Rodrigues et al. (2016), the age group of the interviewed farmers

was concentrated above 51 years (61.8%), coinciding with the present study. Machado and Dupas (2013) found that the greater the age, the lower the probability of the individual paying for water. The cause may be related to the advance of environmental education in schools, according to the authors, and the fact that young people are more aware of environmental concerns. Another explanation given by the authors is that it may be because older people do not trust the correct allocation of resources and/or the high Brazilian tax burden.

Around 38% of participants had never heard of Hydrographic Basin Committees (CBHs). Approximately 62% were aware of their existence. The CBHs, according to Granziera (2006), are the most important bodies for participation and integration of water planning and management under the watershed approach. The lack of knowledge of their existence by the respondents impairs the participation of these social actors and hinders the integration of water resource planning and management.

Regarding the participation of respondents in the meetings of the Hydrographic Basin Committees, the data indicate that 24.3% of the interviewed farmers participate in the CBH meetings. Of this total, 13.5% participate directly in the meetings, and 10.8% participate by representation; that is, the interviewees are linked to associations of farmers that send representatives to participate in the meetings of the HBC. However, 75.7% of the respondents stated that they do not attend the meetings.

Public participation is a key element in management principles (MOSTERT, 2003). This participation is essential for efficient and adaptive water management; however, the fundamental points for public participation are not well understood. In the case studies outlined by Ballester and Lacroix (2016), it was found that the influence of the participation process on public water policies is provided mainly by the context, that is, legal mechanisms, political leadership and social awareness, while the construction process depends on how the engagement is implemented, mainly the offering of consultations and deliberations.

Access to data and the opportunity to participate in decision-making are key factors in gaining stakeholders' support, involvement and commitment in water resource management (HOOPER, 2008). This author stresses that the lack of transparency and consultation of the local population about the management of water resources can impact management, fomenting resentment and conflicts among those involved. The results of Blackstock et al. (2010) on socially negotiated learning suggest that in order to achieve resilience and enable adaptive management, farmers need to be well informed, aware and proactive, working with policy makers and scientists, rather than passively receiving knowledge transfers.

With regard to questions 13 to 18, related to the motivations of farmers, the results are presented in Chart 2 and Figure 2. From the corpus (set of texts constructed by the researchers and which forms the object of analysis), the text segments (TS) presented in each class were obtained from the statistically significant words. The words in Chart 2 were those that appeared with the most frequency, allowing the performance of the qualitative analysis of the data, highlighting within each class the vocabulary most used

in the responses of the interviewees.

Chart 2 - Most frequent words presented by the interviewees in each class

Class 1 Payment advantages	Class 2 Payment disadvantages	Class 3 Friends that support payment	Class 4 Technicians that support payment	Class 5 Ease of payment	Class 6 Difficulty of payment
advantages	disadvantages	friendship	technically	to levy	difficulty
to use	more	view	EMATER*	payment	expensive
to have	cost	point	to support	money	high
education	counterpart	to support	to approve	to need	lack
river basin	river basin	to approve	FD	to define	payment
rational	incompetent	institution	institution	application	increase
irrigation	to take care	COOPA**	ADASA***	to facilitate	State
investment	increase	to agree	person	to invest	production
conservation	production	use	ANA****	to have	value
to facilitate	tax	to pay	technical	correct price	infrastructure
resource	government	government	use	value	facility
encourage	to charge	person	agriculture	to hamper	exist
to supervise	producer	FD		to apply	price
producer	to preclude	-	-	process	to produce
facility	to produce	-	-	improvement	to remove
infrastructure	to repost	-	-	collection	to report
technology	time	-	-	river basin	relation
quantity	artesian well	-	-	resources	input
-	to put	-	-	to know	tax

Legend: *EMATER- Technical assistance and rural extension company; **COOPA – Agricultural cooperative of Federal District; ***ADASA – Agency for water, energy and sanitation of Federal District; ****ANA – Brazilian water agency

Source: prepared by the authors

In the relationship between classes 1 and 2, related to personal motivation, the relationship between the advantages and the disadvantages was clear. The interviewees pointed out more disadvantages than advantages by highlighting, for example, the possibility of collection making production unviable due to increased costs, as well as the possibility of passing on the value charged to consumers. As an advantage, the educational function of collection was noted, as it would stimulate the use of technologies to pro-

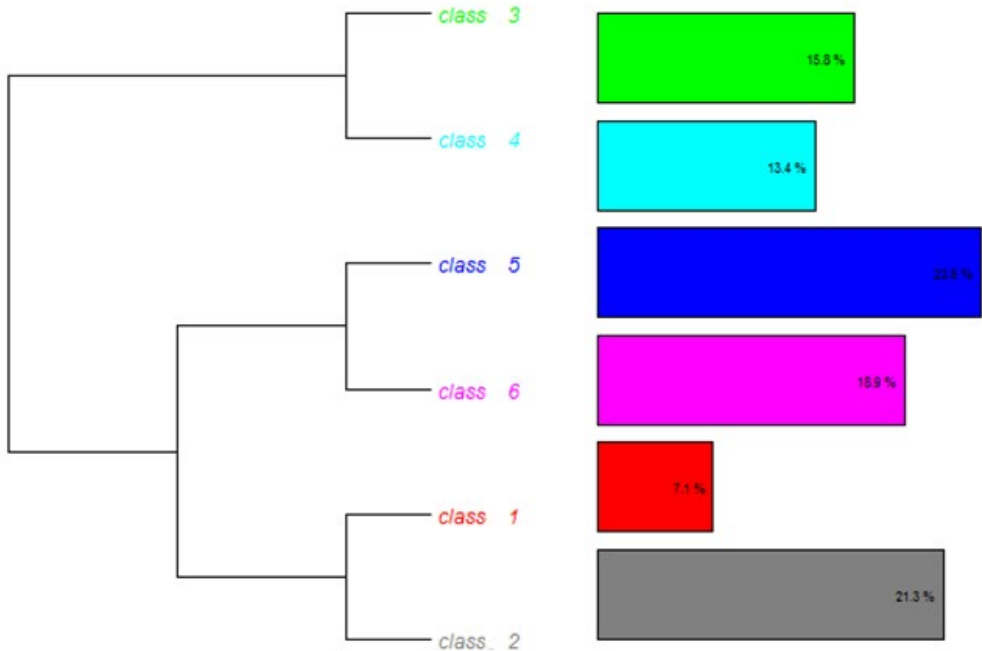
mote the rational use of water resources. Classes 3 (friends that support payment) and 4 (technicians that support payment), related to social motivation, were related to support from friends (family, friends) and technical support (institutions) regarding collection and payment for the use of water resources. The participants demonstrated confidence in institutions such as ANA, Adasa and Emater, but the confidence in people's opinion of their closeness was higher. Class 5 (ease of payment) and Class 6 (difficulty of payment), related to situational motivation, demonstrated the concern of the interviewees with the topic being studied. In pointing out the facilities they could receive from the government that would lead them to pay for water, the interviewees revealed solutions to the existing difficulties. Respondents said much about what the government could do to encourage them to pay for the use of water resources. Some opinions refer to the definition of the fair water price (a subject addressed by all the interviewees) and the certainty of the application of the funds raised in the improvement and conservation of the river basin. Among the difficulties that the interviewees presented, we highlight the lack of infrastructure for the outflow of production and the increase in production costs. In the research, we verified a lack of willingness among the interviewees to pay for the use of water resources.

Figure 2 represents the relationship among the classes referring to the motivation to pay for the use of water resources according to the Descending Hierarchical Classification Method (DHC). The percentages presented in the bars indicate the number of text segments (TS) framed in each class. TS is the short answer to the question of a survey. It is classified according to the respective vocabularies. This method aims to obtain TS classes that present similar vocabulary to each other and vocabulary different from the TS of other classes, which will illustrate the relationships between classes, presented in Chart 2.

From the text segments (TS) in the corpus, significant words were obtained in each class (Chart 2). The corpus was processed and, from this processing, 127 TS were classified with 100% of the total use of the corpus. Then the dendrogram of the classes (with distinct colors) was created, and this figure presents the connection between them.

As the dendrogram (Figure 2) shows, the corpus was divided into two main subcorpora. In the first subcorpus, class 3 (friends that support payment) obtained 20 TS, corresponding to 15.8% of the total. Class 4 (technicians that support payment) had 17 TS, which is equivalent to 13.4% of the total. In the second subcorpus there was another subdivision, which encompassed classes 5 (ease of payment) and 6 (difficulty of payment) and classes 1 (payment advantages) and 2 (payment disadvantages). Class 5 (ease of payment) presented 29.9 TS with 23.6% of the total. In class 6 (difficulty of payment) 24 TS were identified, with an equivalence of 18.9% of the total. Class 1 (payment advantages) presented 9 TS with 7.1% of the total. Finally, class 2 (payment disadvantages) presented 27 TS with 21.3% of the total.

Figure 2 – Dendrogram presenting the relationship among the classes according to the DHC and the number of text segments framed in each class



Source: prepared by the authors

The highest percentage observed in class 5 shows that ease of payment can occur as long as there are possible benefits brought by the payment for the use of water resources, which reinforces the existence of a lack of situational motivation that could be implemented by meeting the demands raised in the interviews, mainly related to lack of information. This aspect is also reinforced when the second highest percentage is observed in class 2, that is, there is a large quantitative amount of TS related to disadvantages in paying, a situation that can be greatly improved by seeking to minimize these disadvantages.

According to Taddei and Gamboggi (2011), in almost all of Brazil there is resistance to the idea of payment for the use of water resources. In the Jaguaribe valley, in the state of Ceara, the population saw fee collection as illegitimate, since it is not based on the idea of reciprocity. The average user understood that the government wants to take something away without giving anything in return, which is not true, the authors continue. They point out, however, that a major problem with charging and payment is that government technicians tend to see the issue exclusively as a technical and not as a political question, which for this very reason needs to be negotiated. Collection and payment are seen as illegitimate punishment inflicted on the people who work, because they will have their production costs increased, but also legitimate punishment of those who

effectively pollute. Currently, the state of Ceara is a model for Brazil in terms of payment for the use of water resources. Furquim (2017), studying the implementation of a charge for the use of water in Cristalina (GO), observed that this fact did not induce changes in decisions about soil use and water resources use by the farmers, thus questioning whether charging is really fulfilling its role as a public policy, encouraging the user to seek more efficient technologies.

The implementation of fee collection requires strong political will and, for it to be continuous, it is fundamental that there must be an organized system of registration, granting and inspection, according to Godecke (2014). In a study of the collection system of the São Francisco River Basin, Assis et al. (2018) also consider the importance of including flexibility mechanisms in situations of water scarcity, priority in use, effluent treatment and irrigation technology.

According to Devi et al. (2009), willingness to pay for water is influenced by attitudes and motivations on a regional and individual scale, which are fundamental influences and help us to understand how people value environmental goods. In the present study it was possible to observe that the situation of lack of information and the low participation of users of water resources influenced the low or non-existent motivation to pay. However, meeting the demands of farmers could reverse personal motivations.

It should be noted that farmers made suggestions that, if implemented, could motivate them to pay for the use of water resources (class 5). They would agree to the payment if the funds raised were applied and invested to improve the watershed and would facilitate payment if the price charged was fair. Actions that stimulate payment are necessary, such as tax benefits, tax exemptions, easy access to agricultural credit, financing of machinery, investments in technology, as well as environmental education, access to information, publication of state and district actions on the PNRH, application of financial resources to the CBHs to fulfill the purposes for which they were created. Anyway, it is necessary for the producer to trust that what he pays will be returned to him and to the hydrographic basin. They need to see that paying for the use of water resources is not paying taxes; that is, it is something returnable.

Several studies have shown that situational factors are also capable of modifying behavioral beliefs. In Hensher, Shore and Train (2005), hygiene was the reason why people paid for the use of water resources. The amounts raised would be used to improve the water supply service, which had suffered several disruptions. According to Wondolleck and Yaffee (2000), farmers' behavior can be influenced by several institutional mechanisms: legal instruments, economic rewards, advice and voluntary collective actions. All these results show that there is a need for a Governmental initiative to motivate users to pay for the use of water resources.

Conclusions

The data obtained in the present study showed that farmers dem-

onstrate low willingness to pay for the use of water resources. Criticisms and mistrust regarding the system were widely stated. The results mainly provided evidence of difficulties and disadvantages for effective payment, highlighting negative social motivations.

However, the study reinforces that the low participation in the CBH meetings generates a lack of knowledge on the PNRH and its frameworks. The participants formed a confused and untrue conviction about this policy, which undermines the implementation of charging for the use of water resources.

Besides that, there is a strong negative situational motivation that can be altered and will tend to become positive if the State performs interventions that meet both the demands for information and the questions raised by the farmers, about environmental and personal benefits, in order to bring their motivations, attitudes and behaviors to light. This integration between the actors involved is fundamental for the effectiveness and success of the implementation of political actions for sustainable management.

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PERCEPÇÕES E DISPOSIÇÃO DE AGRICULTORES DO DISTRITO FEDERAL SOBRE PAGAMENTO PARA USO DE RECURSOS HÍDRICOS

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Artigo Original

Resumo: Embora já tenha sido iniciada em alguns estados, a cobrança pelo uso de recursos hídricos ainda não está generalizada no Brasil. O objetivo dessa investigação foi conhecer a percepção e a motivação dos produtores rurais com relação ao pagamento pelo uso de recursos hídricos, de modo a viabilizar a cobrança trazida pela Lei nº 9.433, de 1997- Política Nacional de Recursos Hídricos (PNRH). Nesse contexto, buscou-se a obtenção desse conhecimento por meio de pesquisa qualitativa e um questionário semiestruturado aplicado a trinta e sete produtores rurais de cinco bacias hidrográficas do Distrito Federal. Os resultados obtidos, por meio do software Iramuteq, mostraram a ausência de motivação para pagar pelo uso dos recursos hídricos, mas também deixou claro que esse posicionamento situacional negativo pode ser modificado se o Estado intervir no sentido de atender tanto as demandas por informações quanto os questionamentos trazidos, de maneira a despertar motivações, atitudes e comportamentos sustentáveis.

Palavras-chave: Cobrança; iramuteq; motivação; consumo sustentável; uso da água.

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PERCEPCIONES Y MOTIVACIÓN DE LOS AGRICULTORES DEL DISTRITO FEDERAL A PAGAR POR USO DEL AGUA

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Artículo original

Resumen: Aunque ya ha comenzado en algunos estados, el cobro por el uso de los recursos hídricos aún no está muy extendido en Brasil. El objetivo de esta investigación fue conocer la motivación y la percepción de los productores rurales con respecto al pago por el uso de los recursos hídricos que es importante para permitir la recaudación según lo dispuesto en la Ley N° 9.433, de 1997, Política Nacional de Recursos Hídricos (PNRH). Así se buscó este conocimiento a través de una investigación cualitativa y un cuestionario semiestructurado, aplicado a treinta y siete agricultores en cinco cuencas del Distrito Federal. Los resultados obtenidos, usando el software Iramuteq, evidenciaron la desmotivación de los agricultores para pagar por el uso de los recursos hídricos, pero también dejaron claro que esta posición coyuntural negativa tiende a modificarse si el Estado interviene para atender tanto las demandas de información como las preguntas planteadas, para despertar motivaciones, actitudes y comportamientos sostenibles.

Palabras-clave: Cargo; iramuteq; motivación; consumo sostenible; uso del agua.

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