

# CONSIDERATIONS ABOUT THE COMMUNITY MANAGEMENT OF WATER AROUND THE SOCIO- ENVIRONMENTAL ISSUE IN THE VILLAGE ALTO SAN PEDRO DE PASTO.

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## Abstract.

**W**ater care is a top priority for the conservation of various forms of life; it is a common cause that involves the development of both individual and collective processes to enable a new relationship between humans and the natural environment, focused on the sustainability of water resources, in addition to, the access to clean water and sanitation as essential public services.

This article delves into the elements that form part of Community Water Management (CWM), taking as a reference the analysis conducted in the Alto San Pedro village of Pasto, Colombia, based on direct engagement with key stakeholders: the Village Aqueduct Administrative Board and the Environmental Committee of the Agustín Agualongo Municipal Educational Institution. Through various methodological strategies, these groups were able to identify the socio-environmental challenges in their context related to water resources.

It begins with a description of the essential factors of CWM, including community participation, the identification of key stakeholders, organizational forms for water management, and the recognition of water resources in the context. The article then describes the socio-environmental issues affecting the water source of the village aqueduct, Quebrada Yacuco, from a holistic and environmentally responsible perspective. From this reflection, a critical discussion is proposed about the reality of CWM from an inclusive, territorial approach, suggesting some conclusions aimed at water governance as a process that requires the coordination, commitment, and action of different stakeholders in the territory to promote collective alternatives for the conservation, protection, and use of water as a vital resource.

**Palabras clave:** water, participation, community, governance, organization, services, environment, heritage, problems, actors.

## Resumen.

En la actualidad, el cuidado del agua es un objetivo prioritario para la conservación de las diferentes formas de vida; una causa común que implica el desarrollo de procesos individuales y colectivos para hacer posible

## REFLEXIONES ACERCA DE LA GESTIÓN COMUNITARIA DEL AGUA ENTORNO A LA PROBLEMÁTICA SOCIOAMBIENTAL, VEREDA ALTO SAN PEDRO DE PASTO.

un nuevo relacionamiento entre el ser humano y el ambiente natural, enfocado a la sostenibilidad del patrimonio hídrico, del cual se deriva, además, el acceso al agua potable y al saneamiento, como servicios públicos esenciales.

Este artículo de reflexión presenta los elementos que hacen parte de la Gestión Comunitaria del Agua, en adelante GCA, tomando como referente el ejercicio de análisis realizado en la vereda Alto San Pedro, corregimiento de La Laguna, municipio de Pasto, Colombia, a partir del acercamiento directo con actores estratégicos: La Junta Administradora del Acueducto Veredal y el Comité Ambiental de la Institución Educativa municipal Agustín Agualongo, quienes mediante diferentes estrategias metodológicas, lograron identificar la problemática socioambiental de su contexto, con relación al patrimonio hídrico.

El artículo inicia con la descripción de los factores esenciales de la GCA, incluyendo la participación comunitaria, la identificación de actores estratégicos, las formas organizativas para la gestión del agua y el reconocimiento del patrimonio hídrico del contexto; posteriormente, describe las problemáticas socioambientales que afectan a la fuente abastecedora del acueducto veredal, "Quebrada Yacuco", desde una visión holística y de corresponsabilidad ambiental. A partir de la reflexión, se propone una discusión crítica a acerca de la realidad de la GCA, desde un enfoque territorial, incluyente, planteando algunas conclusiones orientadas hacia la gobernanza del agua, como proceso que requiere de la articulación, compromiso y acción de diferentes actores en el territorio para promover alternativas colectivas para la conservación, protección y uso del agua como elemento vital.

**Palabras clave:** Agua, participación, comunidad, gobernanza, organización, servicios, ambiente, patrimonio, problemática, actores.

## I. INTRODUCTION.

Water access and its comprehensive management are determinant factors for the subsistence and development of rural communities, in this sense, Community Management of Water is recognized as the process by which the communities are organized to guarantee the supplying of drinkable water service and sanitation, as well as guarantee that the water sources can get its own sustainability.

Based on the above, it is presented the article called "Considerations about the community management of water around the socio-environmental issue, in the village Alto San Pedro de Pasto.", from a reflexive and critical analysis of the environmental reality contextualized in the rural surroundings. The first part deals with the elements that are attached to the GCA, highlighting the role of the strategic actors, the involvement from the participation of the community and the reckoning of the importance of the hydric patrimony, as elements that are joined to the process of GCA.

In the same way, it is identified the socio environmental issue, as part of the collective construction exercise that was obtained by means of a methodology that promoted the active participation, critic analysis, debate, proposals from different experiences and concepts, about the present situation of the "brook Yacuco", hydric source that supplies the village aqueduct. This approach with strategic actors let to define the negative environmental impact that threatens its preservation and therefore, the possibility to access to basic public services affecting in the future the welfare of its population.

In that sense, it is stated a discussion directed to understand the dynamics and the community management in relation with water from an approach of environmental co-responsibility and the dynamization of the community work to prevent and mitigate the socio environmental issue from the governance of water based on the empowerment and social cohesion, directed to the reach of the sustainability of the hydric patrimony.

## II. ESSENTIAL ELEMENTS OF THE COMMUNITY MANGEMENT OF WATER.

Rural communities have a direct relation with water, since they depend of water for their livelihood, life`s styles and organization. In this context, CGA is a community organized form to guarantee the provision of a basic public service and also to help in the sustainability of this vital element; since," it implies a process of making decisions by which it is determined the future of a village in terms of its development , water and sanitation" (Bastidas &Garcia ,2002,p.4); involving actively the local communities in the administration and sustainable management of the hydric patrimony, that is relevant in territories where this resource is threatened by socio environmental issues as in the case of" the brook Yacuco" located in the village Alto San Pedro of the municipality of Pasto.

Location of the village Alto de San Pedro, district of La Laguna, municipality of Pasto.



**Source:** Municipal major office of Pasto (2020).

In the social organization processes is identified the presence of strategic actors which are defined themselves as a group of individuals that interact in a common territory, interchange resources, materials of information and abilities and share socio cultural frames that let them read their environment and certainty to interact in the territory" (Silva Avila, 2019,p.168); in this respect , it is recognized the aqueduct management board of the village Alto San Pedro, in the frame of the Decree 421 of 2000, " by which is ruled the number 4 of the article 15 of the law 142 of 1994, in relation with the authorized organizations to provide the public services of drinkable water and basic sanitation in small municipalities, rural areas" (Ministry of Economic development ,2000), where the board is the provider of the public service of the aqueduct, taking in charge not only the provision of the service but also takes the responsibility to preserve the hydric sources that supply the system.

Location of the brook Yacuco, source of supplying of the village aqueduct.



**Source:** *Photographic register of this investigation (2024).*

On the other hand, the Environmental Comitee of the Municipal Educational Institution (IEM) Agustin

Agualongo is recognized in the educational field, from an environmental perspective of co- responsibility by which , are made processes of promoting of collaborative environmental actions to improve the scholar and community surroundings.

From the perception of community participation around the management of water, the strategic actors can interact by meetings, as sceneries to interchange ideas, reflections, and making of decisions on behalf of the community and other processes such as the collaborative works to develop specific activities as the planting of trees, cleaning of cisterns and some trainings that have been oriented mainly to condition the access roads and the maintaining of the village aqueduct.

However, these actions stem from the community initiative, without having to have processes of articulation or continual institutional support; according to the members of Aqueduct Management board and the Environmental committee of the IEM Agustin Agualongo, it is highlighted the self-management, as an essential basis to achieve its aims, based on the practice and knowledge owned of the rural community, without the intervention of external actors. The community, by its organization, has implemented processes according to its abilities and resources, to secure the access to drinking water and the management of source that supply the catchment system.

The community participation, understood as "a collective awareness of all the community, about events that hinder growing, by means of critical reflection and the fostering of associative and organizational forms that facilitates the common welfare" (Ibañez, 2018, p.1), requires of governance processes, in which there is a real articulation among different social, community, institutional, academic, and trade union actors, among others, to get better results and obtain a higher impact.

About it, the Ministry of Environment (2024), that quotes IDEA (2013), recognizes the governance, as a process to the comprehensive management of water, understood as a common welfare of every living beings, that promotes the active and inclusive participation of different social actors in the decisions and that articulate multiple cultures, knowledge and formal and non formal normative instruments to different space and time scales in specific socio political contexts, economical and ecological. From this statement

are required new strategies that make possible the dialogue and agreements to reach a common objective: the sustainability and comprehensive management of the hydric patrimony.

### III. IDENTIFICATION OF SOCIO ENVIRONMENTAL ISSUES IN THE SURROUNDINGS OF THE HYDRIC SOURCE: "BROOK YACUCO".

The identification of socio environmental issues from the context was made by means of the participation of the strategic actors of the village Alto San Pedro, by meetings, panel discussions, and workshops through the "Metaplan": a methodology of participative dialogue, which uses the maieutic method of inductive character based on dialectics" Hughes et al., 2009,p.2), complemented with field work, that for Calixto & Amortegui(2021) is an educational tool that implies the displacement of students or investigators to an specific surrounding with the purpose to observe, investigate and learn directly about natural, cultural or social phenomena". These strategies were essential to establish the dialogue between actors to be able to analyze critically and reflexively the issues; express and organize its ideas clearly, promoting participation and constructive dialogue.

View of the socio environmental issue in the surroundings of the brook Yacuco.



**Source:** Photograph of this investigation, (2024).

Beginning from these methodological tools it is agreed on the identification of some elements that unchain the socio environmental issues, specifically in the "Brook Yacuco", highlighting: deforestation, construction of houses in aquifer areas, inadequate disposition and management of waste of agro chemical (cans and bags) that contaminate the sources of water; together with the scarce environmental awareness and the weak knowledge about the local hydric patrimony.

Methodology for the identification and analysis of the socio environmental issues.



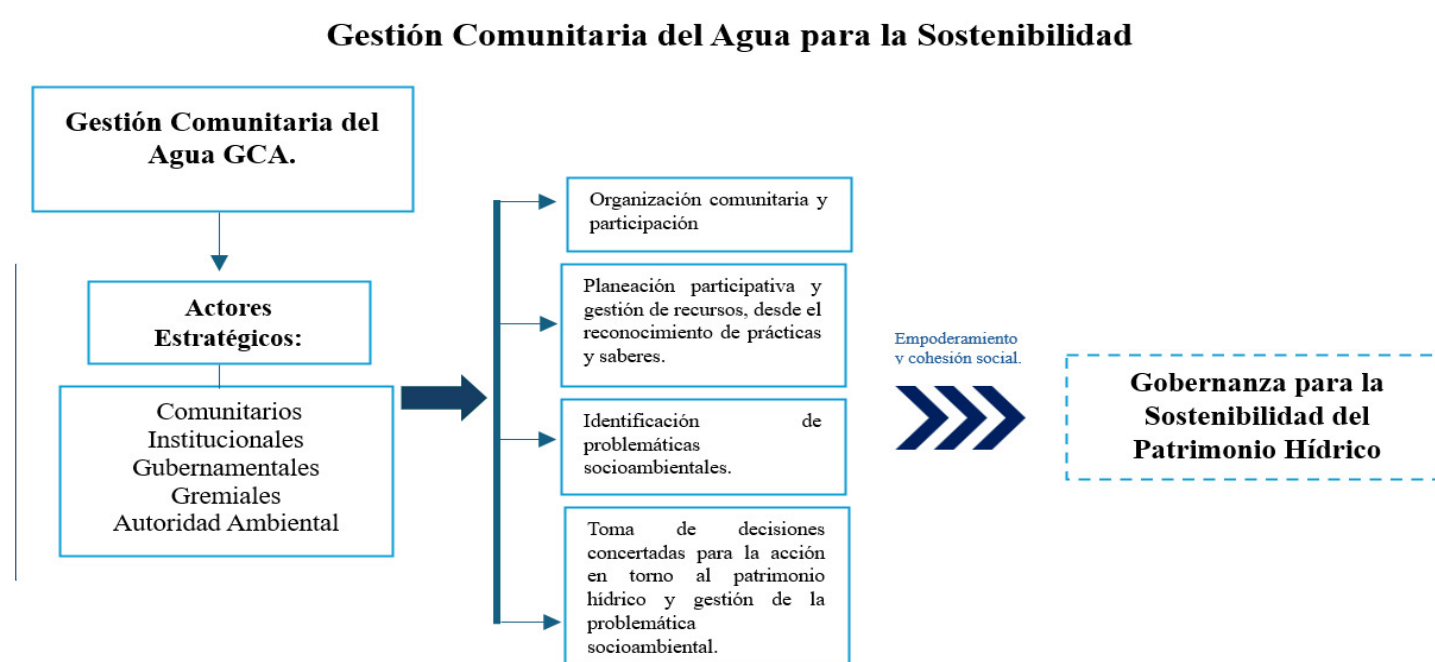
**Source:** Photograph of this investigation (2024).

"We all are part of the problem, however, we are also part of the solution", a premise that was constructed as a start point to advance in processes that make possible CGA and along with it to obtain the Governance of Water in the territory, which is defined by the Environmental and Sustainable Development Ministry (2012) along with the Planning National Department (DPN), define as the process that,

Recognizes the priority of water as an essential element for life in coordination and co operation processes of different and diverse social, sectorial, and institutional actors who participate in its comprehensive management and

assume the territory and the river basin as active entities in such processes, with the purpose to avoid that water and its dynamics become threats for the communities (...). (Minambiente, 2024, P1).

*Outline: Community Management of Water for sustainability.*



*Source: This investigation (2024)*

The articulation of community and strategic actors in the management of water is essential to strengthen the governance of this vital resource, since it promotes empowerment and the social cohesion as key pillars to reach the sustainability of the hydric patrimony. According to Bocarejo (2018), “the governance of water looks to include seriously not only the local villages but also to offer tools for the participation of the multiple interested parts” (p.1113). This inclusive and participative approach allows that the communities take control of the processes of management and conservation of water, fostering the co-responsibility and the collective compromise, integrating the local knowledge and getting strategic alliances, the community abilities are strengthened to face environmental challenges, promoting an equal and sustainable management of the hydric resources that guarantee its availability for the present and future generations.

## IV. DISCUSIÓN.

The access to water is an essential right in connexity with the right to health, life and collective welfare. However, the reality of the rural communities is worrying; the micro basin Las Minas and particularly the brook Yacuco

are facing degradation due to the deforestation for the use of firewood, the farming expansion and the lack of environmental control. The socio environmental issues include the lack of knowledge of the community about the situation and present condition of these hydric sources; contamination due to dumping, inadequate disposition of agro chemical remains and the general lack of awareness and environmental co-responsibility.

These questions underline the need of a new approach of GCA for the sustainability that can be inclusive and ethical; based on the articulation between the community, the local government, the environmental authorities, trade unions and the academy among other actors that are presented in the territory. Only through a together effort it could be possible to protect and assure the access to this vital resource for the present and future generations, promoting a new culture of conservation and environmental responsibility.

Dupuits (2014) highlights the importance of the institutional articulation in the community management of water, he mentions that co-operation between communities and public institutions strengthen the ability of management, promotes the sustainability of the hydric resources and guarantee a higher participation in the making of decisions. This process of articulation permits that the communities have access to technical

and financial resources, and also it fosters the recognition and support to a government level.

The above mentioned implies to advance in the community management as “a construction space, from which is to possible to make social, political and/or community practices (understanding and fostering the ability to associate of the individuals that make part of it.), to improve the life quality of its members “(Maldonado et al., 2019, p.10), work to get a common purpose , from the plurality of thinking, knowledge and experiences to get a cultural transformation toward the conscious articulation among actors, with a vision that integrates different generations from an equality approach to diminish or mitigate the impact in the hydric sources.

Based on these statements the community management of water as a process, in relation to what is stated by Ruiz & Gentes (2008) implies:

- Participation of all the actors in the making of decisions in relation with the comprehensive management of water, this assures that the needs and concerns of all the affected are considered and a collaborative approach be promoted; that in relation Vargas (2018) highlights the importance of the community participation as an essential pillar in the management of the hydric sources. In Colombia more than 12000 organizations of community aqueducts are considered an expression of participative environmental management; they guarantee the access of water in rural and outcast areas.
- Equity in the access to water, guarantee that all individuals and communities have a fair and equal access to the hydric resources. Therefore, it is necessary to have secure access of water of quality in sufficient quantity for everybody. Alvarado and Najera (2018).
- Efficient and sustainable use: it must be centered in the efficiency in its use, assuring that the hydric resources are used in a way that minimizes the wasting and conservation be promoted. That according to what is described by Moreno and Gunter (2013) highlight the way in which the communities play an essential role when they implement practices of conservation and the adequate management of this vital resource, being adapted to contexts of scarcity and strengthening its resilience ability before environmental challenges.
- Responsibility of all the involved: all actors must be responsible of their deeds in relation with the management of water. The shared responsibility

fosters a sense of property and compromise with the sustainable management of this resource.

- Transparency in the decisions based in data and accessible and understandable for all the people involved. This helps to the generation of trust and legitimacy of the policies and adopted measures.

Process that is without any doubt necessary and requires from shared efforts to facilitate the meetings, the community work and the making of decisions in function of collective and strategic interests to improve the present condition of the hydric sources that supply different aqueducts and that are in high risk because of the anthropic intervention. It is a reality that impacts our communities and pushes us to think and design strategies in the short term.

## V. CONCLUSIONS.

- GCA in communities located in rural areas is essential to guarantee not only the supplying of drinkable water but also , it can help mostly in the sustainability of the hydric patrimony , because it promotes the community organization for the making of decisions and makes visible the need to reach a culture of conservation and environmental co -responsibility.
- GCA implies the active participation of all its actors, guarantying equity to its access, efficient and sustainable use; shared responsibility and transparency. These elements are essential to reach the governance of water, empowering the community and fostering the necessary cohesion for the sustainability of the hydric patrimony.
- The dialogue of knowledge, the generational interchange; and also the estimation of experiences, are key elements in the identification of socio environmental issues and become in essential reference, in the process of construction of sustainable alternatives, because they integrate diver perspectives, interests and knowledge, to face challenges and structure viable solutions in particular contexts.
- It is necessary to advance toward processes of inclusive governance, that empowers the community and articulate actions among community, government,

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22

