

REPORT

The Public Interest Litigation Group of the Universidad del Norte, the University of Florida Levin College of Law Conservation Clinic, and the Asociación Interamericana para la Defensa del Ambiente (AIDA), according to the information given in the previous text about the Ramsar Site Number 951, “Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta” present the following technical report.

I. General description, ecological conditions of the region and projects designed on the ecoregion¹

The "Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta" has been declared a Ramsar site on May 18, 1998 by Decree 224 of 1998, constitutes the most important estuarine wetlands in the country due to its area, as it contains the largest coastal lagoon in Colombia, and its role in the country's economy. Its socio-economic value is represented by the fisheries resources and agricultural activities, as well as those populations living in the region which depend on such resources.²

The Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta, contains the most important and the greatest extension of mangrove ecosystems of the Colombian Caribbean. This

¹ The "Ecoregion" CGSM is the territorial approach that includes those systems that interact ecologically complex estuarine and decisively for the long-term survival. The key element that links the components of the ecoregion is water, including all the different ways in which it is presented in the system (surface water: fresh water, estuarine water, seawater and groundwater). It consists of the adjacent sea area (Gulf of Salamanca), Ciénaga Grande de Santa Marta, the complex of marshes and creeks of the island of Salamanca and Pajarales floodplain of the banana zone and the floodplain of the river Magdalena until swamp of Cerro San Antonio. Ver, VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Repensando la Ciénaga: Nuevas miradas y estrategias para la sostenibilidad de la Ciénaga Grande de Santa Marta*. Universidad del Magdalena – Universidad Autónoma de Madrid. 2011. P. 21.

² Ministry of Environment, the Magdalena River Delta Estuary, Ciénaga Grande de Santa Marta System. Information Sheet on Ramsar Wetlands. Colombia, February 1998. P. 3

wetland system consists of more than 20 lakes, with different levels of sedimentation and salinity, of which the Great Marsh is the largest (45,000 hectares).³

Besides being a wetland of international importance that falls within the Magdalena River Delta Estuary System, the Ciénaga Grande de Santa Marta has other declarations attesting to its significance and ecological importance. Thus we have the following: Sanctuary of Fauna and Flora of the Ciénaga Grande de Santa Marta, 1977; Declaration of UNESCO Biosphere Reserve "Ciénaga Grande de Santa Marta", 2000.

Despite the ecological importance of the Ciénaga Grande de Santa Marta, and the many instruments that work to promote its conservation, including the Ramsar Convention, it is evident that the Ciénaga Grande de Santa Marta is in a state of deterioration accompanied by evident institutional weakness.

In reality, the Ciénaga Grande de Santa Marta (hereinafter CGSM) has undergone a process of deterioration as the result of human activities. These activities were mainly in the form of civil construction (pipelines, dams, roads), with the greatest impact from the construction of the road connecting the city of Baranquilla with the municipality of Ciénaga.⁴ This road was built between 1956 and 1960 and since its construction, the flow of water between the marsh, the Magdalena River, and the Caribbean Sea is interrupted, leading to increased soil salinity in mangrove and inland water bodies. As a result of the marsh hypersalinization, thousands of hectares of mangrove forests were lost, biodiversity decreased, and there was a depletion of fishery resources. According to reports from the state authorities, between 1956 and 1995, there was a loss of approximately

³ Ibid. p. 2

⁴ Ibarra, K. P., M.C. Gómez, E.A. Vilorio, E. Arteaga, M. Quintero, I. Cuadrado, J. A. Rodríguez, L. Licero, L.V. Perdomo y M. Rueda. 2014. "Monitoreo de las condiciones ambientales y los cambios estructurales y funcionales de las comunidades vegetales y de los recursos pesqueros durante la rehabilitación de la Ciénaga Grande de Santa Marta". INVEMAR. Informe Técnico Final 2013. Santa Marta 160 p.+ anexos. P. 1. En el mismo sentido: Ministerio de Ambiente, Vivienda y Desarrollo Territorial (MAVDT) & Corporación Autónoma Regional del Magdalena (CORPAMAG). Plan de Manejo para el Sitio Ramsar y Reserva de la Biosfera Sistema Delta Estuarino del río Magdalena, Ciénaga Grande de Santa Marta. Ministerio de Ambiente, Vivienda y Desarrollo Territorial - Corporación Autónoma Regional del Magdalena. Bogotá., Impreso en los talleres de Unión Gráfica Ltda. Enero, 2004. P. 67; Unidad de Parques Nacionales Naturales de Colombia. Plan de Manejo Santuario de Flora y Fauna de la Ciénaga Grande de Santa Marta. *S.f.*, P. 5

285.7 km² (28,570 hectares) of mangrove forests equivalent to 55.8% of the original coverage in 1956 (51,159 hectares).

Following the deterioration of CGSM, monitoring activities were used and mitigation actions were implemented where dredging is performed and where five natural channels are being constructed, which have a continued partial connection between the CGSM and the Gulf of Salamanca due to box culverts built under the road.⁵ However, these efforts were inadequate and failed to control and/or prevent the effects of events known as the phenomenon of "El Niño" and "La Niña."⁶ These weather events ended significantly, influencing the recovery process of the CGSM.

According to the report of the Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés –INVEMAR-, in 2000, due to the lack of maintenance of the pipes, the water entering the marsh was reduced, notwithstanding his negligence did not succeed in the swamp, since it was mitigated by the event "La Niña" occurred in 1999, which helped to wash the floors and lower salinity further the contributions of the rivers from the Sierra Nevada de Santa Marta⁷.

In other cases, the "El Niño" has contributed, together with the negligence of the State, to cause the loss of green cover at the CGSM. Consistent with CORPAMAG and INVEMAR, in 2003, because of poor maintenance of pipes and "El Niño" 1,160 hectares of mangrove forest were lost.⁸

⁵ The box culvert is a short, ~~closed rectangular structure~~ structure, normally made of reinforced concrete, which construction of closed rectangular section used is used to transport water, sediment, and waste and allows vehicular traffic at intersections of roads and trails.

⁶ La Niña is characterized by unusually cold surface ~~temperatures of unusually cold~~ in the central and eastern tropical Pacific Ocean, ~~while~~ whereas El Niño features unusually warm ocean temperatures in the ocean surface. Both phenomena are closely linked to large-scale changes in atmospheric pressure and circulation patterns ~~associated large scale~~, and are considered the opposite phases of the ocean-atmosphere interaction in the region. ~~Alter~~ These phenomena alter the normal rainfall patterns and atmospheric circulation in the tropical latitudes, and have widespread impacts on climate in many parts of the world, with climate risks involved. Experts from the Bureau of Meteorology of Australia have established a link between heavy rain and flooding with La Niña.

⁷ Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés, INVEMAR. Convenio Interadministrativo No. 57 de 2013 entre el MADS y el INVEMAR, Elementos técnicos y generación de capacidad para el ordenamiento, conservación y manejo de los espacios y recursos marinos, costeros e insulares de Colombia. Código: ACT-VAR-001-013 Informe Final. Santa Marta, Noviembre de 2013. Pp. 133 – 134.

⁸ Information obtained in defense of the right of petition presented to CORPAMAG the April 11, 2014, file 2365. P.6. In that application, it was required to ~~CORPAMAG entity to~~ provide to CORPAMAG information on programs and projects related to CGSM and stilt villages; reversing the environmental surcharge and destination of such resources. Given the partial compliance by the authority to obtain the information it was necessary to resort to courts through the

According to INVEMAR, just since 2006 it took an active maintenance of the pipes. **Although, the municipality of Sitio Nuevo reports that current clogged pipes "Aguas Negras"**⁹, as well as the environmental degradation of the watersheds of rivers from the Sierra Nevada Mountain System Santa Marta (SNSM), which flow into the Ciénaga Grande de Santa Marta.¹⁰

However, the lack of control and prevention by the State with respect to climate change, state officials say the execution of these prior works, along with the occurrence of the weather event known as "La Niña" contributed to the recovery of mangrove forests more than 70% compared to its original state.

However, what is striking and worrisome is the inconsistency in the information provided. There is no agreement among the various reports proffered by entities of the state concerning the percentage recovery of mangrove coverage, generating uncertainty on thoroughness, reliability, and consistency of the information provided by the responsible entities.

Additionally, inconsistencies were found in the report handed down by the environmental authority CORPAMAG. According to the report, from 1995 to 2011, it was able to recover much of the coverage of mangroves. The following table expresses the recoveries¹¹:

writ of protection. The application was distributed in Twelve Labour Circuit Court of Barranquilla, under file No. 218 - 2014, who decided to grant the protection of the fundamental right of petition. On June 11, 2014, pursuant to the ruling, it was obtained.

⁹ Information obtained in defense of the right of petition filed June 5, 2014. In the said application to the Mayor's Office of Sitio Nuevo was requested to provide information on programs and projects related to CGSM.

¹⁰ Unidad de Parques Nacionales Naturales de Colombia. Op. Cit. P. 5

¹¹ Information obtained in defense of the right of petition presented to CORPAMAG the April 11, 2014, filed 2365.

DINAMICA DE RECUPERACIÓN DE LOS BOSQUES DE MANGLAR DE LA CGSM.

Año	Manglar vivo (ha)	Manglar vivo (%)	Recuperación (%)
1956	51.150	100	-
1995	22.580	44,1	0
1999	25.750	50,3	6,2
2001	27.850	54,4	10,3
2003	26.690	52,2	8,1
2007	29.620	57,9	13,8
2009	33.900	66,3	22,2
2011	37.470	73,2	29,2

Source: CORPAMAG Report, 1995-2011

The reference table identifies the recovery of mangroves for 2011 as 73.2%, compared to the existing state of coverage before the mass mortality of mangrove forests in 1956. In that sense, CORPAMAG reported the existence of 37,470 hectares of mangroves alive for that year. This finding is contrary to the data expressed in the following graph displayed in the same document:



Source: CORPAMAG Report, 1995-2011

According to the graph above, the coverage of mangroves hopefully equates to 30,000 hectares. In contrast to the data provided in the same document, the chart places the mangrove coverage extension lower than that in the data table. This contradiction that arose within the same document is worrisome. Moreover, this uncertainty about the percentage of recovery of mangroves is also found within other reports proffered by other state agencies.

INVEMAR collected the same data in the table set out in the report from CORPAMAG. The Technical Report contained the result of monitored environmental conditions in the years 2011 and 2012. The 2013 Technical Report considerably modified the reported figures, showing improved environmental conditions regarding the coverage of mangroves and directly contradicting its previous technical reports. This can be seen in the following table:

Tabla 4.2-7. Dinámica histórica de la cobertura de manglar de la CGSM.

ID	AÑO	TIPO DE SATÉLITE O SENSOR	ÁREA DE MANGLAR VIVO (ha)	MANGLAR VIVO (%)	COBERTURA DE MANGLAR RECUPERADO	RECUPERACIÓN (%)
1	1956	Fotografías Aéreas	51.150	100	-	-
2	1968	Fotografías Aéreas	49.060	96	-	-
3	1987	Fotografías Aéreas	30.340	59	-	-
4	1993	Imágenes de Satélite SPOT XS y LANDSAT TM 1993	26.440	52	-	-
5	1995	Imágenes de Satélite SPOT XS y LANDSAT TM 1995	22.580	44	-	-
6	1997	Imágenes de Satélite SPOT XS y LANDSAT TM 1997	23.770	46	1.190,0	4,2
7	1999	Imágenes de Satélite SPOT XS y LANDSAT TM 1999	25.750	50	3.170,0	11,1
8	2001	Imágenes de Satélite LANDSAT TM 2001	29.158	57	6.578,0	23,0
9	2003	Imágenes de Satélite LANDSAT TM 2004.	26.701	52	4.120,6	14,4
10	2007	Imágenes de Satélite SPOT XS y ASTER	29.576	58	6.996,0	24,5
11	2009	Imágenes de Satélite ASTER	35.631	70	13.050,8	45,7
12	2011	Imágenes de Satélite SPOT 4 XS y ASTER 2011	38.544	75	15.964,1	55,9
13	2013	Imágenes de Satélite SPOT 5 y Landsat 8 2013	39.569	77	16.989,1	59,5

Source: INVEMAR Report, 2013

This table shows that the final report by INVEMAR is not consistent with the report by CORPAMAG, and in that sense, neither is the previous technical reports proffered. So presented below:

CORPAMAG REPORT; INVEMAR Technical Report 2011 – 2012.			
YEAR	LIVE MANGROVE AREA (ha)	LIVE MANGROVE (%)	RECUPERATION (%)
2001	27.850	54,4	10,3
2003	26.690	52,2	8,1
2007	29.620	57,9	13,8

2009	33.900	66,3	22,2
2011	37.470	73,2	29,2
INVEMAR. Technical Report, 2013			
YEAR	LIVE MANGROVE AREA (ha)	LIVE MANGROVE (%)	RECUPERATION (%)
2001	29.158	57	23,0
2003	26.701	52	14,4
2007	29.576	58	24,5
2009	35.631	70	45,7
2011	38.544	75	55,9
2013	39.569	77	59,5

Source: Compiled and extracted from the mentioned technical reports.

It is important to note that the recent Technical Report modifies the data making it contradictory and much more favorable in terms of the mangrove recovery process. In other words, the information seems to vary according to the convenience of the person presenting the data.

CONTRADICTIONS IN THE STATE REPORTS			
CORPAMAG REPORT; INVEMAR Technical Report 2011 – 2012.		INVEMAR. Technical Report, 2013.	DIFFERENCE
YEAR	LIVE MANGROVE AREA (ha)	LIVE MANGROVE AREA (ha)	(+/-) Hectares.
2001	27.850	29.158	1.308
2003	26.690	26.701	0.011
2007	29.620	29.576	-0.04
2009	33.900	35.631	1.731
2011	37.470	38.544	2.099
2013	-	39.569	-

Source: Compiled, extracted from the mentioned technical reports.

These contradictions that arise within the same entities and the same reports do not allow for certainty to exist with respect to the percentage cover of mangroves; in contrast, these inconsistencies generate distrust in the work that is done by the State. The truth is that other sources

differ from the data relating to mangrove loss in the period between 1956 and 1995. While the authorities report the loss of 55.8% of the original coverage in 1956 (51,159 hectares). VILARDY talk about the loss of 60% of the mangroves.¹² On the other hand, AGUILAR asserts that by 1995, the mangrove forests reduced to 17,760 hectares, a loss of 65% of the initial coverage in 1956.¹³ Whatever the case, this situation reflects the intention on the part of state institutions to minimize environmental problems and reduce administrative efforts for the recovery of a wetland affected by a crisis that dates back over half a century. The analysis provided above coincides with the fact that social and environmental management at the regional level of the CGSM is in constant diminution.

From 1996 to 2001 (the date on which the project PROCIENAGA¹⁴ was implemented), the governor of Magdalena developed 118 projects in the municipalities of CGSM ecoregion, of which 48% were socioeconomic projects, yet only 5% were environmental projects. From 2002 to 2006, projects for the Ciénaga Grande de Santa Marta ecoregion decreased by 65%; only 41 social or environmental projects were been promoted by the Government in the ecoregion.¹⁵ Currently, most of the projects that have been designed for the management and environmental remediation in the Ciénaga Grande de Santa Marta are without any effect, mainly due to lack of funding (or due to pending funding).

The following are some of the projects or actions, which were designed to have big impact on the CGSM, yet none have been implemented:¹⁶

¹² VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Op. Cit.*, Pág. 67

¹³ AGUILERA DÍAZ María, *Habitantes del agua: El complejo lagunar de la Ciénaga Grande de Santa Marta*, Banco de la República, Cartagena, 2011. P.10.

¹⁴ The PROCIENAGA project was led by CORPAMAG, COLCIENCIAS INVEMAR the Regional Planning Board of the Atlantic Coast (CORPES), and had the support of the German International Cooperation (GTZ). The project lasted 10 years (1992-2002) and resulted in the most significant management CGSM. From this project the statement of the ecoregion as a wetland of international importance listed as RAMSAR Wetland Biosphere Reserve was promoted. In this regard see, VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Op. Cit.*, Pág. 112 – 113.

¹⁵ *Ibíd.* P 115.

¹⁶ Information obtained in written reply right of petition filed March 26 and June 5, 2014. A request for information was necessary for the governor of Magdalena information on programs and projects related to CGSM and stilt villages, making-with emphasis on the Integral Recovery program CGSM.

- Environmental Management Project for the silt villages of Nueva Venecia and \ Buenavista, located in the area of **impacts** of the Wildlife Sanctuary in the CGSM (*Regional Proposal without revision*).¹⁷
- Tools for strengthening the capacity for the management and protection of the mangrove ecosystem of the Wildlife Sanctuary at the CGSM. Input for the management and administration of a Ramsar site and Biosphere Reserve in the Colombian Caribbean (*Profile unfunded*).
- Habitats of importance for the conservation of migratory birds associated with mangrove ecosystems of the Wildlife Sanctuary of CGSM and of the Salamanca Island Road Park. Input for the management of a Ramsar site and Biosphere Reserve in the Colombian Caribbean (*Profile unfunded*).
- Implementation of a Comprehensive Solid Waste Management System for the municipalities of Sitio Nuevo and Pueblo Viejo, of the Magdalena Department (*Profile*).
- Restoration of the **lagoon wetlands complex** of the Cienaga Grande de Santa Marta (*Project formulated without funding*).
- Building capacity in stilt communities in the **area of influence** in the Wildlife Sanctuary of CGSM as a basis to restore degraded mangroves in the **lagoon complex** (*Project formulated without funding*).
- Education, communication, and participation in the conservation of the Ramsar wetland of the Magdalena River Delta Estuary System, Cienaga Grande de Santa Marta (*Approved without resources*).
- Ecosystem services of the Magdalena River Lagoon Complex: an opportunity for competitive improvement of the Caribbean region (*Profile*).

¹⁷ The ~~Sanctuary~~-Wildlife Sanctuary -refers to a declaration of a reserve area, approved by Decision No. 0024 of June 9, 1978 the INDERENA. Its jurisdiction is in the municipalities of Pivijay and Whirl and the authority ~~which-that~~ regulates them is the National Parks Unit and shelters 23,000 hectares. The purpose of the declaration is to preserve and conserve wildlife species and national flora for scientific and educational purposes.

The Colombian State, at the 12th Meeting of the Conference of the Contracting Parties, Uruguay, 2015, through the National Report Format (NRF), has indicated that it "is necessary to strengthen the financial support for the implementation of priority projects and activities in the management plans."¹⁸ The financial weakness could explain the failure by the State for the application and implementation of environmental programs. However, it should be noted that administrative efforts focused on other projects. It is known that in 2007, the projects about infrastructure development in the ecoregion actually represent 46% of the Governorship of Magdalena Projects Database,¹⁹ but lacks effective results for the CGSM. It added that the area of impact of the CGSM is considered a strategic area for transportation, energy, and communications sectors. In reality, it projected or executed different megaprojects within which they are extending the dual carriageway of the Ciénaga-Barranquilla and the construction of ports on the Magdalena River run.²⁰ This is the case even though the consequences of the construction of the road were already known, as were the ongoing deteriorating conditions (which still exist) in the CGSM.

II. Conditions of the Ramsar Convention in the Magdalena River Delta Estuary System, Cienaga Grande de Santa Marta and description of the ancestral populations residing in the CGSM

As is well known, the Ramsar Convention is a call for the contracting parties to establish new obligations, so that the duty of Contracting States is not only the Convention itself, but also compliance with the recommendations and resolutions offered at the Conference of the Contracting Parties. Therefore, taking into account the discussion in previous sections, we have shown that Colombia has failed to fulfill its obligation arising from the concept of "wise use" of natural resources and water.

¹⁸ Regard G and H points of Section 2: General Overview of Progress and Challenges in national implementation; National Report on the Implementation of the Ramsar Convention on Wetlands. National Reports to be submitted to the 12th session of the Conference of Contracting, Uruguay, 2015. P. 10 Parties.

¹⁹ VILARDY

²⁰ INVEMAR P. 190.

Based on the most current definition, the "wise use" of wetlands is the "maintenance of [the] ecological characteristics, achieved through the implementation of ecosystem approaches, within the context of sustainable development."²¹ From this concept, it requires conservation of wetlands with minimum conditions to employ sustainable development, so that those wetlands intended to carry out certain development activities can continue to provide long-term ecological and social services. Under that vein, we question how do you ensure the maintenance of the ecological character of an ecosystem, in the context of sustainable development, when you do not have the administrative and financial sufficiency for the management and recovery of the ecosystem? Even if we assume for a moment that the cited reports of environmental authorities are rigorous and reliable, we are still facing a critical situation. La Ciénaga Grande de Santa Marta is still almost 30% below its green cover, in relation to an earlier state of cover dating for over half a century (1956, road construction). The instrumental ineffectiveness of the Colombian state is exaggerated even more when we talk about the restoration of the most important ecosystem on the Caribbean coast.

Under the recommendations and decisions of the Conference of the Contracting Parties regarding the "wise use," it must be equivalent to maintaining the benefits and ecosystem services to ensure the long-term maintenance of biodiversity, as well as human welfare and poverty alleviation.²² In that sense, Resolution IX.14 issued on the 9th Meeting of the Conference of the Contracting Parties

²¹ It includes among others the "ecosystem approach" of the Convention on Biological Diversity (Decision V / 6 of the CBD COP-5) and applied by HELCOM and OSPAR (Declaration of the First Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, Bremen 25 and 26 June 2003. The Secretariat of the Ramsar Convention, 2010. has described the "ecosystem-based approach" as a comprehensive approach for implementation of the Convention defines the CBD (Decision V / 6, COP 5, 2000) the "ecosystem approach" as "... a strategy for the management integrated strategy of land, water and living for the conservation and sustainable use in an equitable way resources management therefore, the application of the ecosystem approach will help to achieve a balance between the three objectives of the Convention.: conservation; sustainable use; and fair and equitable sharing of benefits arising from the utilization of genetic resources distribution. This concept is consistent with the overall concept of "wise use". Ramsar handbooks for the wise use of wetlands, 4th edition, vol. 1. Secretariat of the Ramsar Convention, Gland (Switzerland). See footnote. P. 17; Pp. 29 - 30.

²² The conceptual framework developed by the Millennium Ecosystem Assessment (MA) for the maintenance of ecosystem services for human [well-being/welfare](#) and poverty reduction, offers a multi-scalar approach indicating how and when you can perform interventions and make decisions on policy and management. Within the framework of the [EMMA](#), the "wise use" is equivalent to maintaining the benefits [and/](#) ecosystem services to ensure the long-term maintenance of biodiversity and human [well-being/welfare](#) and poverty alleviation. In this regard see, Secretariat of the Ramsar Convention, 2010. Op. Cit. P. 14.

to the Convention on Wetlands (Ramsar, Iran, 1971)²³ considered the importance of the social aspect for the maintenance of wetlands, and so *urged* Contracting Parties to adopt measures aimed at poverty reduction. Referring particularly to the following areas:

- ***Human life and security***: measures designed to protect against impacts such as cyclones, storm surges, saltwater intrusion, droughts, and floods through sustainable use and restoration of wetlands;
- ***Access to resources***: measures to improve the accessibility and development, capacity for the sustainable use of resources of land, water, and wetlands. One example of such a use includes the uses of fish which fully comply with both international and national law and also respect the rights of local communities and indigenous peoples in accordance with national law and applicable international obligations;
- ***Ecological sustainability***: measures to improve the priority given to sustainability in all major sectors of integration policies, including measures of ecosystem restoration;
- ***Government***: measures to improve the participation of the poor in the processes of decision-making and institutions of management;
- ***Economies***: measures to maintain or improve in an environmentally sustainable manner, the benefits and ecosystem services provided by wetlands.

So, it should be noted that the conditions within the Ecoregion Ciénaga Grande de Santa Marta, are the municipalities of Pueblo Viejo, Sitio Nuevo, El Reten, Remolino, and Salmina. Other municipalities that have jurisdiction over areas corresponding to portions of their territory that lie between 86% of the Zona Bananera and the 5% of Aracataca. Within the system there are nine main municipalities, with populations ranging from 87,355 from Ciénaga and 4,219 in the county

²³ It also highlights the decisions of the Conference of the Contracting Parties, including Resolution 5.6 on the wise use of wetlands, VII.8 on Guidelines for establishing and strengthening the participation of local communities and indigenous peoples in the management of wetlands, VIII.23 on incentives as tools to achieve wise use of wetlands and VIII.36 on Participatory Environmental Management (PEM) as a tool for the management and wise use of wetlands; And Decision IV / 4 of Convention on Biological Diversity on the status and trends of biodiversity of inland water ecosystems and options for conservation and sustainable use.

seat of the Zona Bananera. The remaining population is distributed in rural areas in towns and villages. According to the census conducted in 2005, there are 341,428 inhabitants, of whom 186,001 live in the county seat and 155,427 in rural areas.²⁴

In general, the economy of the ecoregion Ciénaga Grande de Santa Marta is mainly characterized by the development of basic activities of the primary sectors: fishing, farming, ranching and agribusiness. The secondary sector is emerging, due to its proximity to the city of Barranquilla, which displaces the matter of investment in capital and infrastructure, except for the eastern zone, having agro-economic activities. The tertiary sector activities are concentrated at the head of the largest towns, such as Ciénaga or Pivijay, with the presence of entities like banks and marketing products.²⁵ The practice of artisanal fisheries in CGSM corresponds, in part, to the historical and cultural patterns of the local population, and secondly, the expectations of economic growth and development planned in the area. Among the latter are agribusiness and ranching activities underway in the eastern zone (Zona Bananera, el Retén, Pueblo Viejo and Aracataca,) and western zone (Pivijay, El Piñon and Salamina); and in the western and southwestern region along the pipes Aguas Negras and Renegado (Sitio Nuevo and Remolino).

The ecoregion Ciénaga Grande de Santa Marta is one of the poorest areas of the Department of Magdalena. Municipalities that form present indications of populations with unmet basic needs (UBN)²⁶ between 43.5% and 67.27%; the population living in rural areas of most municipalities have more unmet basic needs than the residents of the municipalities. There is no adequate coverage of basic public services; in general, electric power is the service with the most coverage (between 73.9% and 96.4%).²⁷

²⁴ *Ibíd.* P. 37.

²⁵ *Ibíd.* P. 39.

²⁶ The UBN indicator is a composite indicator of other simple indicators selected as “hHousing inadequate”, Housing “housing critically overcrowded homes with inadequate services”, Housing “housing with high economic dependence”, and Homes “homes with school-age children not attending school”, which determine what percentage of the population is poor.

²⁷ VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Op. Cit.* Pág. 37.

Drinking water is a critical service; aqueduct coverage ranges between 50.8% and 86.31%, but the uptake of water is shallow, mostly sourcing the Magdalena River without any treatment for human consumption. In some municipal centers such as the municipality Zona Bananera, drinking water is drawn from deep wells.²⁸ The most common illnesses reported by the health post in Bocas de Aracataca in 2004 were acute respiratory infections (ARI) and acute diarrheal diseases (ADD), which occurred with frequencies of 60% and 30%, respectively (POT 2005-2017, Diagnosis, p. 32). These diseases are caused by the consumption of unsafe water, lack of latrines, poor sanitation service, the dumping of liquid and solid waste from human settlements located close to surface water bodies, and agrochemical waste from crops such as bananas and African palm²⁹.

The coastal villages and villages on stilts (Nueva Venecia, Buenavista, and Bocas de Aracataca) of the jurisdiction of the municipalities of Pueblo Viejo and Sitio Nuevo are exerting greater pressure on the production of waste going directly to the lagoon system, and, as a whole, produce 975 tons of solid waste per year. In the town of Pueblo Viejo, toilet service covers 40% of the waste, which is only collected three times per week. Although the township has a landfill, they have insufficient space to meet the needs of the population.³⁰

Inside the Pueblo Viejo and Sitio Nuevo municipalities, we call to your attention the particular situation of the districts of Nueva Venecia, Buenavista, and Bocas de Aracataca (also called Trojas de Cataca). These districts are stilt communities settled literally on the Ciénaga Grande de Santa Marta. Favorable conditions of the CGSM ecoregion, including the presence of fresh water and abundant fish species (both marine and river), **led to a slow but definite occupation**. Temporary fishing camps existed first, but then gave rise to a permanent population who built their houses on piles driven into the bottom of the swamp. These houses protruded above the water level, which placed them in a shed gable that reached the level of water. That was how the current stilt villages

²⁸ *Ibíd.* P. 39.

²⁹ AGUILERA DÍAZ María, *Op. Cit.* P.26.

³⁰ *Ibíd.*

of Nueva Venecia (also called El Morro), Buenavista, and Bocas de Aracataca (or Trojas of Cataca) were formed. The oldest is Nueva Venecia which originated in 1847.³¹

These homes do not have water or sewer service, yet some of them do have light service. Thus, because communities lack the technical service for disposal and treatment of solid and liquid waste and excrement, most waste is dumped directly into the marshes, increasing pollution levels. Only in Buenavista are garbage collection options available. Currently in the districts of Nueva Venecia and Buenavista, the construction of a sewage system and water supply is currently awaiting approval.³² Meanwhile, residents of the stilt houses on the River Aracataca or along the sewer pipe that feeds the Magdalena River carry water in drums equally without treatment.³³ These communities do not have natural gas, and villagers depend on fuel wood from the mangroves to cook.

On the other hand, employment conditions are no better. The census conducted by the Governorship of Magdalena and municipal mayors in 2008 indicate that of those of working age in the population, 27.1% are employed, 22% are in school, and 18% are devoted to housework, whereas 32.8% of the population was unemployed (of those, only 1.5% were looking for work). Needless to say, the poor conditions threaten the ecosystem, as the intense exploitation of resources derived from the gradual increasing population who depends on the fishery resources contributes to loss of biodiversity³⁴.

With all the problems and challenges that involve stilt populations, it is important to add that their presence does not contradict the declaration of CGSM as Ramsar and Biosphere Reserve area.³⁵ Before, the Ramsar Management Plan recognized and sought to contribute to the maintenance of

³¹ *Ibíd.* Pp. 3 - 4

³² Information obtained in written reply right of petition filed March 26 and June 5, 2014.

³³ VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Op. Cit.* Pág. 39; Concuerta AGUILERA DÍAZ María, *Op. Cit.* P.27 – 28.

³⁴ AGUILERA DÍAZ María, *Op. Cit.* P. 17.

³⁵ This information is extracted from the "Management Plan for the Ramsar site and Biosphere Reserve, Magdalena Delta Estuary System, Ciénaga Grande de Santa Marta river." Ministry of Environment, Housing and Territorial Development; Corporacion Autonoma Regional del Magdalena (Corpamag); Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés, INVEMAR. Bogotá – Colombia. Pág. 140.

cultural and traditional attributes of coastal towns and stilt villages. Currently, UNESCO has requested the declaration as a World Heritage "Cultural Landscape of Vernacular Housing Palafitica CGSM"³⁶ reaffirming the idea of including the stilt populations in the CGSM. It also affirms that INVEMAR that given its traditional character, the communities where they practice artisanal fishing are those that best know and understand the natural dynamics of the swamp,³⁷ especially the stilt villages.

III. Main activities that alter the ecosystem of the Ciénaga Grande de Santa Marta

We must emphasize that the main factors degrading the ecosystem, by far, are the deposits of agrochemical residues and plugging sources of fresh water, where the works carried out by the environmental authorities continue to limit irrigation from the water sources. Coupled with agricultural activity that unfolds around the swamp, which uses other sources of water for irrigation and disposal of chemical waste, this provides the necessary premises to support our accusatory hypothesis.

However, it is clear that access to the resources of the Ciénaga Grande de Santa Marta is very limited. Many of the municipalities in the ecoregion depend on artisanal fishing for subsistence; in other words, their livelihood depends on the environmental conditions in which the wetland is located. As noted above, most municipalities do not have access to water, and many of them are exposed to the consumption of water without treatment. The lack of a water supply and a sewer sanitation system directly affects the area of the swamp that receives large amounts of waste. In addition, this is aggravated by the lack of controls by the Colombian government on climate change and salinity levels. Thus, it was observed that in the winter of 2010, the water level rose more than a meter, affecting and threatening in the main form stilt communities where water entered their homes at a height of 50 centimeters³⁸.

³⁶ Information obtained in written reply right of petition filed March 26 and June 5, 2014 to the Governorship of Magdalena.

³⁷ Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés, INVEMAR. Op. Cit. P. 190 191.

³⁸ AGUILERA DÍAZ María, *Op. Cit.* P. 28.

Without a doubt, all this has affected not only the ecosystem in question, but has been placed on vulnerability to "human life and safety" in most communities in the ecoregion of the CGSM.

The State of Colombia has sought to obtain additional resources through the application of Law 981 of 2005, as amended by Act 1718 of 2014, which created an "environmental surcharge". CORPAMAG, which is in charge of resource management, has financed investment projects for the recovery of mangrove forests, and has provided that 10% of the resources of this surtax be invested in socio-productive projects for fishermen in the swamp. These funds have been invested from 2006 to 2013 in the following programs and as follows: Recovery, Maintenance, and Conservation of the sewers in the Magdalena River Delta Estuary, spending approximately \$25.2 billion; Network Monitoring and Tracking in the CGSM (2014), with addition of nearly 98.4 million pesos; Farm Pilot Implementation for Aquaculture and Fish Farming Technology Transfer and Knowledge Communities of Fishermen in the CGSM Ecoregion, \$1.4 trillion; and other socio-productive projects, with investments of nearly \$327.5 million, aimed at improving infrastructure and inputs for fishing, empowering communities, and tending to decrease the pressure on fish resources produced in the CGSM to recover affected areas and establish sustainable economic productivity conditions.³⁹

Despite being one of the most studied natural systems of Colombia and one that has received the most financial and technical resources, La Ciénaga Grande de Santa Marta represents a failure of the administration, since the constant signs of environmental crisis are quite obvious, as is the deterioration of the living conditions of local residents.⁴⁰ We can say that we are in an area where the instrumental inefficiency of the State had no control of the social, environmental, economic conditions affecting CGSM, even despite the high investments and the support received by non-governmental entities.

³⁹ Information was obtained in defense of the right of petition filed on April 11, 2014, I filed 2365.

⁴⁰ VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Op. Cit.* P. 16.

At this point, it should be noted that Colombia has stated in the National Report to the 12th Meeting of the Conference of the Contracting Parties, Uruguay, 2015, as to its compliance with the poverty alleviation requires economic support to strengthen the implementation of priority projects and activities in the management plans. And the inclusion of wetland issues into strategies for poverty eradication has only been partial.

It is inevitable to note that the CGSM Ecoregion contains populations in extreme poverty and vulnerability, which are suffering from the absence or poor presence of the State. These communities are constantly excluded, and the lack of effective public participation mechanisms prevents them from linking to the decision-making process related to environmental management of the wetland. The various institutional actions developed to manage the system, not entirely built and incorporated in the action maps of all the actors, have become socially unviable long-term strategies. This sum of situations has generated recurring conflicts with local communities and the traditional uses that they **make of biodiversity**; with good reason, these situations have affected the lack of fulfillment of the objectives of environmental management and producing an erosion of trust and leadership of environmental authorities and their actions against local communities and the general population.⁴¹

IV. Justification of the inclusion in the record Montreaux Delta Magdalena River Estuarine System, Ciénaga Grande de Santa Marta

Following the commitments made by the State of Colombia and the need to fulfill the conditions found in the CGSM, it is imperative to implement effective actions to be executed not only by officials of the State institutions, but also by the locals and NGOs that retain interest in solving or mitigating the adverse conditions that facing the CGSM . That is why, following the guidelines

⁴¹ Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés, INVEMAR. Op. Cit. P. 190.

established in the Treaty, we are requesting the inclusion of the wetland of the “Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta” in the **Montreux Record**.

The **Montreux Record** is a record of the sites included in the List of Wetlands of International Importance, as well as the location of any changes in the ecological characteristics that have occurred, are occurring, or may occur changes as the result of technological developments, pollution, or other human interference. The registry was established by Recommendation 4.8 of the Conference of the Contracting Parties in Montreux in 1990. The Resolution 5.4 of the Conference of Kushiro in 1993 determined that its purpose is to identify sites that require particular attention in terms of conservation through national and international action.

Ramsar sites are included in the Montreux Record by the Contracting Parties through three ways:⁴²

- 1) Based on information provided in the national reports for meetings of the Conference.
- 2) Statements made by the Contracting Parties at meetings of the Conference.
- 3) In response to a suggestion by the Bureau of the Convention when it was alerted to the desirability of including a given location in the registry.

Based on the premise for inclusion of sites on the Montreux Record, "**sites included in the List of Wetlands of International Importance, where they have occurred, are occurring or may occur changes in ecological character, as a result of technological developments, pollution or other human interference,**" it is valid to include the Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta" on the list. The CGSM has not recovered from the lingering negative effects from the construction of the Barranquilla – Swamp road in 1956, and by contrast, is threatened by a number of factors and circumstances just outlined, which have produced adverse ecological changes above, and they retain the potential to continue to produce such changes.

From visits to the CGSM; verbal exchange with people (essentially those in the stilt villages of the Ciénaga Grande de Santa Marta) and with government officials linked to the swamp; and the

⁴² Regard, Resolution VI.1 Conference Brisbane, 1996

analysis of information on the ecological and social situations experienced in the marsh, we present the following as the most alarming threats:

- **The degradation of green coverage within the CGSM:** As we have been saying, the construction of the road between Barranquilla and the swamp led to one of the most harmful events for the wetland. The most negative impact was the loss of thousands of hectares of mangrove forests. While works to mitigate the impact were undertaken, the fact is that governance in the ecoregion CGSM declined significantly since the administration of the Biosphere Reserve and the Ramsar Wetland did not have the desired effect. Mangrove recovery is a priority, because mangrove forests play an important role in the reproductive cycle for fish and shellfish, and provide shelter and habitat for migratory and native birds species and other fauna. As such, it is imperative that these resources recover.
- **The extension of the Barranquilla-Marsh Road:** The construction of the Barranquilla-Swamp-Santa Marta road 60 years ago still have consequences for ecosystem CGSM because it blocked the water exchange CGSM and the Caribbean . At present, the country and the region are keen to expand this route, and even reduce other environmentally protected areas, such as the Salamanca Island and CGSM own. Licensing authorities and environmental protection have concurrent jurisdiction in the development of the road, and in turn, have different purposes. First, the National Infrastructure Agency (ANI), determined that the dual carriageway that connects Marsh with Barranquilla, has been divided into two phases, with the first already running between Santa Marta and Cienaga; however, due to limitations in the environmental licensing, construction has not yet begun to run between Cienaga and Barranquilla. On the other hand, the memorandum 20131300097883 directed to the Department of Management and Management of Protected Areas by the Legal Office of Natural Parks, show that the work of improving roads that are located within areas of National Natural Parks, is an activity it is limited by the regime uses the system areas, and cannot even be contemplated as a licensable activity. However, due to economic, political and social pressures, and the start of construction on the first leg of the great project, execution of the rest of the track is imminent, despite the declaration of environmental protection opposes the execution of these works.

- **High levels of salinity in the water (hypersalinization)**: Salinity is a major cause of mortality of mangroves and dry soils. Salinity depends on erratic rainfall and low flows resulting from the sedimentation in the pipes that bring fresh water from the Magdalena River. Authority reports show a decrease in the level of salinity in the water. However, residents of the stilt populations reported the presence of high concentrations of salt in the form of a foam, which plugs the sewer pipes. Recently, there was a fish kill, according to the people of Nueva Venecia, which occurred because of the high levels of salinity.

It is worth noting that the stilt communities are the social group that interact and participate in the implementation of the various programs and processes that have been developed in the region. As a result, it is considered that these communities are the most knowledgeable about the reality of the complex lagoon⁴³.

- **Water Pollution**: As has been pointed out, the improper disposal of waste and the dumping of raw sewage into bodies of water are a constant source of pollution in the CGSM. In stilt villages, garbage is disposed directly into the water or **on the banks of the swamp because they lack a collection system**, although some house have septic tanks. In Tasajera, Isla del Rasario, and Palmyra, collection service is provided, but many villagers continue to throw garbage directly into the swamp and thus affect the sanitary conditions of the housing. In Sevillano, they do not have the garbage collection service, so everyone is responsible for carrying waste to the **banks of the swamp** or to burn the waste (as to avoid depositing the waste in the swamp). In this way, the management of domestic wastewater and excrement is very precarious in the study area.⁴⁴
- **Agriculture; Diversion of water; And clogging rivers and streams**: The natural wealth of the CGSM enables the development of multiple agro-industrial activities such as oil palm cultivation, banana cultivation, livestock, animal breeding, and the commercialization of crab and bonefish. In general, these economic actors in the community are identified as agents who

⁴³ Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés, INVEMAR. Ob. Cit. P. 191.

⁴⁴ *Ibidem*. P. 50.

generate conflicts over the use and condition of natural resources and who exercise great power of interference in the dynamics of the territory, public decisions, and with military power, which can mitigate or limit the input state in this area.⁴⁵

The agro-industrial crops require good irrigation, a feature that becomes a source of conflict, including armed conflict, with communities. The lack of control over the activities of this economic union has resulted in the irregular appropriation of water sources by diverting and plugging of pipes for irrigation because the freshwater from the Sierra Nevada de Santa Marta and the Magdalena River fails to enter the swamp in the manner it should. This has caused problems with respect to water quality affecting fisheries, as well as access to this resource by the residents of the stilt houses, which rely on natural sources for water because the aqueduct is lacking.⁴⁶

In addition to limiting access to water resources, the dumping of pesticides and fertilizers that are the results of agribusiness activities is also a source of contamination and generation of conflict. The cultivation of large-scale crops requires the use of lots of chemicals that end up polluting water sources and soils; this practice also happens in the CGSM. According to Vivas-Aguas, agricultural waste, along with household waste, are both major sources of organic pollution in terms of solids, nitrogen, phosphorus, and fecal microorganisms, which generate risks to human health, flora, and aquatic fauna of the CGSM⁴⁷.

On the other hand, the development of livestock activities impacts on the environmental conditions on the wetland. That is, 69% of land dedicated to livestock have between 26 and 250 cattle. This number differs from the rest of the country, where 28% of the farms are in that same range (26 to 250 cattle), while 46% of the farms own less 10 cattle (in the Magdalena area, only 6% of the farms have less than 10 cattle). Buffalo has become more important in the last two decades due to its productive capacity, traction, and adaptability to adverse

⁴⁵ *Ibíd.* P. 95.

⁴⁶ *Ibíd.* P. 96.

⁴⁷ *Ibíd.*

conditions such as low, wet, swampy, and marshy lands. This last feature makes it ideal to adapt to the flood plains of the Magdalena River.⁴⁸

Livestock activity in general is concentrated in the CGSM in the municipalities of Sitio Nuevo, Remolino, Salamina, El Piñón, Pivijay, and Cerro de San Antonio. However, like the cultivation of oil palm and banana, this activity also generates pollutants affecting the CGSM and is perceived by local people as a factor with great power to interfere in access to natural resources.⁴⁹

- ***Fishing***: Fishing has a negative "trade off" with the maintenance of biodiversity. Most commercial fish species and mangrove-dependent arthropods show signs of overexploitation and removed before they reach the size at maturity (chivo cabezón, mojarra lora, macabí, sábalo, robalo largo and shrimp). For this reason, populations of these organisms and food webs that support these species in the mangroves and estuaries are equally affected as the maintenance of biodiversity⁵⁰.

The practice of new ways of fishing impacts the biodiversity of the CGSM. Between 1999 and 2009, the most-utilized fishing gear used to catch the greatest volume extracted in the CGSM included the cast net, the seine, gillnet sets (trammel), and gill net "bolicheo". Together, these devices captured 68% of the total fishing resources extracted. These tools are more effective, but put the resource at risk when the eyes of the netting are very small; there is no permanent monitoring of this lagoon complex to prevent it. The cast net is a traditional fishing tool that does not contribute to the deterioration of the fishery resource, but has decreased in popularity. In 1999, it contributed to 44.5% of the total catch, while in 2009, it dropped 23.4%. **With the dinghy, the "chincorra" and trammel, arts introduced in the CGSM at the beginning of the twenty-first century, extracted a greater volume of mojarra lora⁵¹.**

⁴⁸ *Ibíd.*

⁴⁹ *Ibíd.*

⁵⁰ *Ibíd.* P. 151.

⁵¹ AGUILERA DÍAZ María, *Op. Cit.* P. 35.

- **Mangrove slash and burn**: In the Ciénaga Grande de Santa Marta ecoregion, other extractive activities are also conducted such as: 1) extraction of sea salt in the range between Isla del Rosario and Tasajera and certain sections between Tasajera and Barranquilla; 2) cutting of live mangroves for construction and supply rods to the Zona Bananera; 3) cutting of mangroves and other vegetation for charcoal production in the Isla de Salamanca; 4) cutting of dead and/or dried mangrove for use as fuel in stilts villages; 5) development of small mines producing clay bricks on the right bank of the Magdalena River.⁵²

Although the development of these activities is small-scale, the wood supply affects the contributions made in the area of exploitation of ecosystem services. From the above practices, we highlight the cutting of mangrove for charcoal production, which is mostly done by people of Barranquilla and involves the clearing of large areas of mangroves. It should be added that obtaining charcoal is an illegal activity that involves the burning of mangroves, affecting standing biomass and the productivity of this ecosystem.⁵³

- **Instrumental Ineffectiveness of State Management Plans**: Needless to say, although the CGSM is recognized as a special area of environmental protection nationally and internationally, it is in a latent state of disrepair. Regardless of formulated projects and the large sums of money involved, what stands out is the collapse of state authority and the overall instrumental ineffectiveness of the State. It is urgent that the quality of governance is improved in terms of efficiency and effectiveness, to achieve recovery and subsequent protection of the wetland.
- **Expansion of port facilities and wildfires**: environmental officials have granted licenses in the areas of mitigation of the park (near the village of Palermo) for the construction of a shipyard for the repair and construction of vessels. CORPAMAG has licensed the construction of a port

⁵² VILARDY QUIROGA, Sandra, GONZÁLEZ NÓVOA, José. *Op. Cit.* P. 41.

⁵³ Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andrés, INVEMAR. *Ob. Cit.* Pp. 128, 151, 152.

and marketer of Petrocomercial oil company whose main shareholder is the same as the port Authority of Palermo Port Society. The Magdalena Department also plans to build a port, but is not yet licensed.

Thus, economic and political interests could cause the Port of Palermo to expand and could open the door to the construction of coal ports, container docks, and general cargo. Nobody objects to port development and job creation, but the builders of ports and oil and diesel plants do not give assurances that they will operate with investments that will ensure safety and will not harm the environment. The environmental authorities in charge of controlling port operations have not shown signs of exercising their functions to avoid damage and to punish offenders.⁵⁴

➤ **Other threats:** In addition to those discussed above, other threats to the CGSM include:

- Changes in land use during the nineteenth and twentieth centuries within the country have increased the sediment load in the Magdalena River.
- Dredging of the Magdalena River and works within the Bocas de Ceniza. (directional and embankment dikes) that ensure that most of the water flows through the arm.
- Processes of colonization of the right outer delta by people from the interior of the country who subsequently sold to landowners.
- Closing the Blind pipe (currently Schiller pipe)
- The INCORA awarded lands in areas occupied by swamps.
- Implementation of irrigation districts in the Zona Bananera located in the foothills of the Sierra Nevada de Santa Marta, on the HIMAT.
- Livestock landowners closed pipes to prevent the passage of people.
- Access roads to farms become impervious embankments.
- Landowners closed pipes at the end of the marshes to prevent saltwater intrusion.

⁵⁴ Ver por ejemplo: <http://www.semana.com/multimedia/galeria/la-cienaga-grande-santa-marta-peligro/137853-3>

- The INDERENA projected and began the reopening of the pipe La Ceja towards the Cocos.
- Landowners prevented the reopening of the channel.
- The construction of the road Palermo Sitio Nuevo as a permeable dike.
- Agribusiness harvests were consolidated.
- High concentrations of some heavy metals and pesticides were detected in the swamps of the complex (organochlorines and organophosphates).
- The development of the Prociénaga recovery project, in which it was decided to reopen the pipes to increase the input of fresh water from the Magdalena River. The works are concentrated in Clarín pipes, Aguas Negras pipes, and Renegado. In the last two, they constructed structures to regulate with gates.
- **Deterioration of the works of restoration by clogging pipes.**
- The need for dredging and maintenance of the pipes to ensure the functionality works is generated.⁵⁵

The set of situations described about the CGSM denote the failure of the State of Colombia in terms of the Ramsar Convention and the Constitution of Columbia. The deteriorating state of the CGSM and the presence of multiple threats allows us to speak of an ecosystem in a state of emergency.

⁵⁵ Ver MÚNERA E. Juan Camilo, VÉLEZ Jaime Ignacio, POVEDA Germán, POSADA Javier Eduardo M., CARDONA Yuley Mildrey O., MONTOYA Juan David, Taller de ciencias del mar “dinámica hidrológica de la Ciénaga Grande de Santa Marta Mediante técnicas de sensores remotos”, disponible en: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=2&cad=rja&uact=8&ved=0CCQQFjAB&url=http%3A%2F%2Fwww.researchgate.net%2Fprofile%2FGerman_Poveda%2Fpublication%2F233969446_Dinmica_hidrolgica_de_la_Cinaga_Grande_de_Santa_Marta%2Flinks%2F02bfe50f018e5d0e5500000&ei=yIBaV NnGNiaeNtPPgMAN&usg=AFQjCNHWFIPKr7W9mSX-Bfbzlyo1ZelK4w&sig2=Hc8HYmklSbKt77LPdL-7g&bvm=bv.78677474,d.eXY

V. **Benefits of listing Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta in the Montreaux list**

Among the benefits of achieving the inclusion in the Montreux Record of the Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta are:

- a. Obtaining **financial aid**, by obtaining funding from Ramsar Wetland Conservation Fund or through multilateral or bilateral assistance, which may be requested by NGOs or the State of Colombia. That funds would employ staff trained to work in conjunction with the **existing** projects, which would facilitate monitoring efforts, increase green cover, provide waterworks for reconnection of water sources, improve and and build water, sewer, and toilet systems, mainly in the municipalities of Pueblo Viejo and Sitio Nuevo. All this would be in furtherance of the recovery of an ecosystem of great importance, as is the Ciénaga Grande de Santa Marta, and would begin creating sustainable relationships between the community and the adjacent wetland.

Bearing in mind the importance of the Magdalena River Delta Estuary System, which is one of the most important wetland complexes in the country, this is the first Ramsar site in Colombia, where the Ciénaga Grande de Santa Marta and the complex swamps and streams of freshwater are connected to the main body of water Magdalena River Delta System.

The Ciénaga Grande de Santa Marta is an area that contains a large number of plants and terrestrial and aquatic organisms, of which the following have been identified: 276 terrestrial plant species, 12 aquatic plant species, three mangroves, 300 types of phytoplankton algae, 144 species of fish, 102 mollusks, 26 reptiles, 19 mammals, and close to 199 bird species. Of these, 35 are migratory bird species that use wetlands of the CGSM to feed and reproduce⁵⁶.

⁵⁶ CORPAMAG. “Programa Ciénaga Grande de Santa Marta, una propuesta institucional de recuperación”, Taller de expertos sobre la Ciénaga Grande de Santa Marta, presentación, Santa Marta, 28 de enero del 2008. Citado en: AGUILERA DÍAZ María, *Op. Cit.* P. 13.

Likewise, the CGSM is facing an ecosystem with a socio-economic value represented by the fisheries and agricultural activities, on which populations living in the region depend. The use of environmental management in the context of sustainable development for the persistence of the ecosystem is necessary.

- b. **Support and technical advice.** Without doubt, the inclusion of the “Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta” in the Montreux Record, with subsequent technical and economic benefits will be of full support to achieve improved wetland conditions. In this document, we have mentioned institutional weakness that prevails in the management of the ecosystem. We believe that with international support, such as that which occurred with the PROCIÉNAGA⁵⁷ project, the efficiency and effectiveness of state intervention would significantly improve.

Because of the exposed changes in the green cover and in the area of the Ciénaga Grande de Santa Marta; the social, economic and environmental settings and the various problems present in each area; the instrumental ineffectiveness with respect to the State's compliance with its obligations set out in its Constitution, the Ramsar Convention and its Resolutions and Recommendations, we feel an urgent need to include the "Magdalena River Delta Estuary System, Ciénaga Grande de Santa Marta" on the Montreux Record.

Public Interest Litigation Group

Universidad del Norte

Barranquilla, Colombia

⁵⁷ The PROCIÉNAGA project was led by CORPAMAG, COLCIENCIAS INVEMAR the Regional Planning Board of the Atlantic Coast (CORPES), and had the support of the German International Cooperation (GTZ). The project lasted 10 years (1992-2002) and resulted in the most significant management CGSM. From this project the statement of the ecoregion as a Wetland of International Importance Ramsar List of Wetlands promoted as a Biosphere Reserve.

Interamerican Association for Environmental Defense (AIDA)

Conservation Clinic

University of Florida Levin College of Law

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PHOTOGRAPHIC RECORDS



Photo 1: Sedimentation Caño de aguas negras



Photo 2: Faulty or insufficient maintenance of the input gate freshwater down the Caño de aguas negras



Photo 3: Faulty or insufficient maintenance of the input gate freshwater down the piper de aguas negras



Photo 4: Foam result of the hypersalinization of the CGSM



Photo 5: Foam result of the hypersalinization of the CGSM



Photo 6: Mass mortality of fish occurred on September 25, 2014, because of hypersalinization



Photo 7: Maintenance handmade by one of the residents of the stilt villages to achieve some freshwater flow to the CGSM



Photo 8: Maintenance handmade by one of the residents of the stilt villages to achieve some freshwater flow to the CGSM