# WATER FOR LIFE AND SUSTAINABILITY FUND
## Cauca River Geographical Valley

**Pedro Hernán Moreno Padilla**
**Director Water for life and sustainability Fund**
**ASOCAÑA**
**pmoreno@asocana.org**
**Calle 58N # 3N-15 Cali, Valle, Colombia.**

## 1. Summary

Water for life and sustainability Fund is a regional program covering the high Cauca River geographical Valley in Colombia, being an effort of guilds, private enterprise, public entities, nonprofit environmental and social organizations and community organizations which have committed resources to carry out conservation actions guaranteeing water availability for future generations.

Diagnosis, territorial ordering plans and hydrographical basin ordering plans prepared by municipalities and Regional Autonomous corporations (CAR's) ate the basis for fund justification.

Together with the foregoing, it is the experience and knowledge of Colombian sugar sector, the Nature Conservancy (TNC) and 16 Water User Associations of equal number of hydrographical basins operating since the nineties and knowledgeable of the problematic situation.

Up to 2011, two investments for a total of $2,807,684,560 Colombian pesos (approximately US$1,570,000.oo Dollars) have been made. Financed project scheduled goals aim to solving environmental problems and contributing to recovery of micro-basins highest offer of surface water or aquifers.

Key words: Fund, water, life, sustainability.

## 2. Introduction

The Fund supports environmental actions developed in areas between 1,000 and 4,200 meters above sea level, where most environmental problems are concentrated. Studies carried out during the last few years y environmental authorities Regional Autonomous Corporations – CAR's) and municipalities, show a high hydrographical basins deteriorations state, characterized by a natural ecosystem fractioning. It is estimated that only 17% of natural forest remain from several hundreds of forest fragments.

The conference details the context on which actions co-financed by the Fund are developed, the approach to the problem, objectives, and methodology used to select intervention areas. Afterwards, the Fund creation is presented, through the signature of a memorandum of understanding as an agreement to put together the wiliness, efforts, cooperation and technical, methodological and financial resources to give life to Water for Life and Sustainability Fund.

On the other hand, are the cooperation agreements with CAR's, which are public entities in charge of the environmental authority in the territory, from which information and cartographic support is received.

There are also direct cooperation agreements with the State public entities; such is the case of Ecopetrol with whom three projects have been co-financed for three different basins.

The memorandum of understanding was made up of 16 organizations, is an institutional model generating a long term integral management vision of basins with hydric regulation and maintenance and sediment handling based on scientific calculations and with financial, legal and institutional feasibility.

The functional structure is developed through a Direction Committee for decision making and Fund policy orientation. In the Direction Committee there is participation of private sector academic, ONG's and community members. It is also expected the participation of the public sector.

There is in operation a trust constituted by the Fund generating trustfulness and transparence of third party investments. Currently, there is program in progress on financial consolidation (autonomous capital) to guarantee operating sustainability and long term investment. ASOCAÑA is the trustor, as important entity and trajectory the Valle del Cauca, and enjoys TNC, Cenicaña and the Tropical Agricultural Research Center (CIAT) scientific solidity for the geographical and ecological criteria of priority sites to carry out Fund investments. Similarly, there is support from USAID, TNC, CIAT and CENICAÑA, to monitor the investment impact carried out at the basins.

Cash resource management is associated to contributions made by sugar mills located at the Cauca river geographical valley, companies such as Ecopetrol, having as policy to make investments at the influence area, water user associations and other organizations support the sustainable development where the projects are being executed.

## 3. Methodology

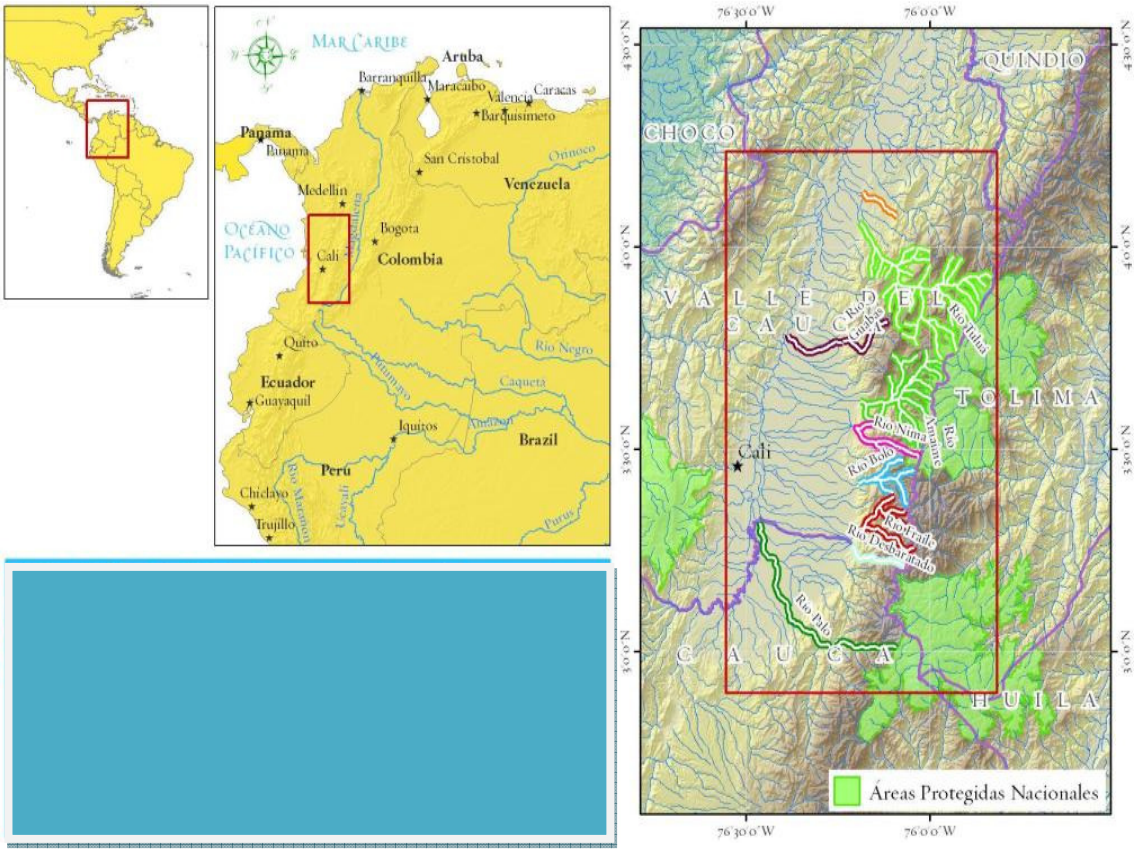
The case study methodology was used, searching primary and secondary information sources on all projects currently in execution and on a project that ended early 2011.

## 4. Results and discussion

### 4.1 Location

Water for Life Fund direct influence area is the hillsides of Cauca river geographical area, which extends for the Northern Cauca Department to Southern Risaralda, Colombia, over an approximate area of 650,000 hectares, altitude ranges between 1,000 to 4,200 meters above sea level. There are moorland, sub-moorland, high Andean and sub-Andean forests and dry forest relicts conserving biological diversity strategic ecosystems and strategic zones of water production. On the other hand, these hillsides are a source of food production for Colombia feedstock security, including fish exploitation and local population recreation scenario.

The flat valley geographical zone, is an industrial development pole and location seat pd several intermediate cities. There are approximately 410,000 hectares of which 230,000 hectares are cultivated with sugar cane.




Map No. 1: Water for life and sustainability Fund influence area.

**4.2 Inhabitants**

As per DANE 2005 data, 1,250,000 out of near three million persons living in the influence zone benefit directly, excluding Cali population, because the water to supply 80% of the population (estimated in2,119,908 inhabitants, according to DANE 2005 census), is taken directly from Cauca River after Rio Palo and Desbaratado River mouth, among others. However, when there are avalanches and problems of water scarcity and Rio Palo basin, almost always the operator a Mallarino water plant stops potable water supply.

Population living in the territory is multi-ethnic that is to say, mixed blood, African descendents, indigenous and white.

**4.3 Potable water users**

The purpose of Water as a natural commodity is for human consumption. At the water for life and sustainability Fund, keeping in mind data supplied by Regional Autonomous Corporation CVC, 2010, www.cvc.gov.co and Northern Cauca Indigenous Town Councils association ACIN 2008, there are approximately 260,000 households connected to the water network with approximately 1,250,000 people taken water coming from the hydrographical basins; most of those rivers are being worked on to improve their natural conditions.

**4.4 Presence of biological diversity**

The program influence area is characterized for being part of Las Hermosas Park at Valle and the snow mountain at Cauca Nevado del Huila cushioning zone. There are still some remains there of Andean forest a dry forest areas and very important moorland area.

Natural pasture represents a high percentage of the soil use, situation affecting the flow regulating role played and preservation of water quality at the high basin zone.

According to CVC- INCIVA 2007 there are 64,0000 hectares of moorland at Cauca Valley Central Cordillera extending from Sevilla to Florida southern Valle. There are on the cordillera certain geographical independent moorland systems of strategic importance, such as, Barragan, Santa Lucia, Japan and Dominguez at the Bugalagrande, Tulua, Amaime and Guabas rivers influence area.

According to CVC – ECOANDINA 2007, the sub-Andean and Andeans ecosystems are rich in epiphytic plants like diversity of orchids and bromeliads. Hemiepiphyte diversity also increases with elevation above sea level, reaching a peak of 1800 meters, after which it decreases.

At the Valle del Cauca Department, sub-Andean forests are defined between 1,200 and 2,400 meters and Andeans, between 2,400 and 3,400 meters. Then there are the moorlands up to 4,200 meters above sea level.

According with CVC INCIVA 2007, CVC – ECOANDINA 2007 and CVC – WSC 2005, there is presence of the following families: Leguminoseoae, especially guamos (*Inga*), Moraceae, Lauraceae, Melastomataceae, Araceae, Rubiaceae, Arecaceae, Asteracea, Fogaceae, Lamiaceae, Passifloraceae, Aquifoleaceae, Acanthaceae, Astereceae, Bignoniaceae, Boraginaceae, Fabaceae, Ecropiaceae, Euphorbieceae, Hippocastanaceae, Juglandaceae,

Meliaceae, Sapindaceae, Bobacaceae, Sapotaceae, Anonaceae, among others. Several of these families are threatened (EN), Vulnerable and low risk (LR).

There are important trees, such as cinchona (*Cinchona spp*), the cariseco (*Billia columbiana*), encenillos (*Weinmannia*) y dulumocos (*Saurauia*). "Swamp leaves" (Gunnera) are common at the swampy areas. There are also some Aracacea species such as Wax Palm (*Ceroxylon spp). There are also higuerones of the Ficus gender* and cucharos and chagualos (*Clusia spp*). It is estimated that there are about 145 Clusia species. There are also Yarumos (*Cecropia*) and "Sietecueros"patches (*Tibouchina lepidota).* Potreros are covered with bush species, like" lacker"(*Vismia*) or "Espadero"*IRapanea).* There are also some native Colombian pine trees of the Podocarpus, Prumnopitus, and Descussocarpus families.

According to CVC 2004 y CVC 2005, at the zone just before the moorland (about 200 meters), there are Ericaceous species including the *Cavendishias,* which grows over the Wax Olive (*Myrica pubescens*). Another important group on plants are those of Holartic origin, for example oak (*Quercus*), aliso (*Alnus acuminata*) and black cedar (*Juglans neotropica*).

At moorlands from 3,400 to 4,200 meters, there are willowy and "frailejones" vegetations *(Espeletia hartwegiana)* intermixed with different species of shrubs.

According with CVC 2004, CVC 2005, CVC INCIVA 2007, CVC – ECOANDINA 2007 and CVC – WSC 2005 there a large amount of mammals living still in the Andean and sub-Andean forests and Valle del Cauca moorlands. Among the most important we have:
White tail deer (Odocoileus virginianus), the corzuelo deer
The Andean bear (*Tremarctos ornatus*), the second largest mammal in South America; the mountain tapir (*Tapirus pinchaque*) is the largest threatened mammal; the tigrillo (Leopardus tigrinus); the White tail deer (Odocoileus virginianus), the corzuelo deers (*Mazama americana y M. rufina*), and the rabbit deer (*Pudu mephistophiles*). Other herbivorous of the Andean forest are the wolf "guagua" (*Dinomys branickii*); there are two tree mammal species in the Andean forests; the two fingered Lazy bear (*Choloepus hoffmanni*) and the howling monkey (*Alouatta seniculus*), the mountain dog (*Potos flavus*) and the "cusumbo" (*Nasua nasua*), both common of the Andean forests. The frugivorous diet is also frequent among rodents family such as Murideae, Sigmodontinae and Heteromyideae.. Bats are represented by Phyllostomideae families in at least six species. Other mammals are the weasel (*Mustela frenata),* and "taira or ulamá" (*Eira barbara*).

There are at least 14 frog species. Lizards are represented by two registered Anolis species.

There is a large bird variety amounting to 110 registered species at Rio Palo and Tulua river basin. The most diverse bird family in the Andean forest is the humming bird (*Trochilidae*). There are mountain toucans (*Andigena*) and parrot species such as (*Ognorhynchus icterotis, Leptosittaca branickii, Hapalopsittaca amazonica*). From the *Tangara* (Thraupidae family) there are 22 registered species out of the 50 existing species. In addition, there are migratory birds most of them Passeriformes.

**4.5 Agro-biological diversity**

Aerobiological diversity presence is the nutritional autonomous source. Middle and high zone basins (mountain base and upwards) or hill side zone include coffee and blackberry which help family food. There are also plantain, brown sugar cane, and cocoa, fruits such as citric, banana, mango, tree tomato, pineapple, guava and avocado. Transitory crops include sorghum, corn, bean, vegetables, tomato, string bean, and green onion. Roots, bulbs and tubercles are also cultivated in the area, including yucca, potatoes, arracacia, ullucus and onions.

The middle and high basin zones are dominated by extensive cattle farming practiced from the flat zones to the highest Central cordillera zones.

It is common to find at the small farmer households the presence of chicken, hens, pigs and rabbits to be used by the family and for sale in the nearby markets. Fish rising is present at all basins, especially at Palo river basin, where in most basins trout industry is exploited.

**4.6 Problematic situation**

Generally, according to date supplied by CVC, 2009, the area is covered by 17% of natural forests, largely represented by a number of fragments; for that reason, ir is necessary to make every effort to establish natural coverage, increase connectivity through corridors, generate soil use changes and avoid the increased deforestation.

Low native vegetal coverage and high native forest fragmentation occur due to lack of valuation and incentives of forest resource conservation. This generates basin degradation processes and opens the opportunity to increase areas for extensive cattle farming and mining penetration.

People living on the river basin hill sides obtain their income from little nature amiable activities, like presence of permanent increase cattle farming, black berry and “Lulo” crops which expand the agricultural boundaries against the natural forests.

During the last few years, at the influence area, the hydric cycle Fund has suffered extensively due to the acuter Nino and Nina phenomena with high water precipitations and for a longer period of time.

It is also evident the low irrigation water efficiency on the flat zone and the weak intervention of environmental authorities. On the other hand, it is of upmost importance to keep in mind all the problematic generated by the climatic change.

From the foregoing, the central problem may be enunciated as the hydrographic basin deterioration by generated conflicts of the soil use, inadequate water usage, natural ecosystem alteration, forest undervaluation, presence of non amiable production with nature, and weak governability.
The main threatening generated by this dynamic includes:

Extensive cattle farming presence and expansion
Cattle farming and mining presence at the moorlands
Little nature amiable agricultural production

Opening of new roadways which produce removal of soil mass and access to new agricultural and mining exploitation areas.
Little employment alternatives for youngsters

**4.7 Objective and Fund strategies**

Due to the problematic situation, the Fund has planned the following strategy:
Increase the natural coverage at the tributary hydrographic basins to Cauca River basin, as a hydric environmental services maintenance strategy of micro-basins supplying water to conserve biological diversity, to the community for domestic consumption, to enterprises for industrial development, for recreation and irrigation of agricultural crops, using a multiple concerted threatening strategy.

On the other hand, it has been defined to implement some strategies for the future years, such as:

- Isolation and conservation of water springs
- Isolation of water stream riversides
- Natural regeneration of strategic ecosystems
- Reconversion of extensive cattle farming to amiable production systems with nature
- Feedstock security promotion activities
- Recovery of erosion affected soils through reforestation, natural regeneration and native species enrichment activities
- Environmental formation and education
- Environmental Service Payment Strategies and long term conservation agreements
- Adaptation to climate changes effect
- Increase natural areas and decrease erosion
- Restoration of fauna and flora niches
- Maintain and improve landscape and recreation zones
- Decrease pressure on forest remains

Water for life and sustainability Fund has the following objectives:

Isolate 8,413 hectares, attain natural restoration of 3,412 hectares, carry out enrichments of 955 hectares of native forest, carry out 1,388 hectare cattle farming reconversion and contribute to protection of the Hermosas Natural National Park, specially its cushioning area; to fulfill the foregoing it is necessary an investment of near $25,000 million pesos.

**4.8 Intervention methodology**

Water for life and sustainability Fund relies on scientific support from TNC, CIAT and CENICAÑA, who have run three software hydrological models to identify the priority areas for basin conservation. Therefore, there is permanent support for site selection and conservation strategies and sustainable use of natural resources. Following Is a brief description of each software:

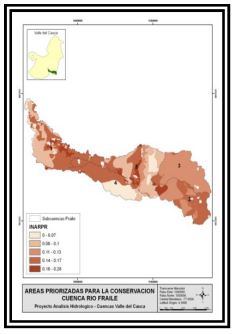
1. INVEST (Integrated Valuation of Ecosystem Services and Trade-offs). This model is characterized by:
Spatial definition of environmental services,
To supply basic value notions of environmental services

To visualize potential conflicts related with use objectives and soil management, Simplification od input information.

2. SWAT (Soil and Water Assessment Tool). The SWAT software is used for basin hydrological analysis, permitting to relate hydrological characteristics (flows, sediments, evaporation/transpiration, escorrentia, lateral flow, percolation, surface aquifer water filling) with the existing basin coverage type, their topography and edaphic conditions. In other words, it does allow analysis of the relationship between the use of land, water and sediments.

3. FIESTA model: Fog Interception for the Enhancement of Stream flow in Tropical Areas. This model is characterized by:
Implementation of monthly cycles and simulates daily cycles
Operate in large space extensions (million of hectares)
Does not model surface hydrology, only interception of fog and evaporation; recognizing that even when fog gain does not contribute to local current, it will do it down waters along the hydrological line.
LUCC (Land Use and Cover Change) model to understand potential hydrological impacts

TNC and CIAT elaborated the modeling basic maps of each basin for intervention; the maps show rhe priority areas for intervention.
For example:




Map No.2, darker areas are prioritized for Rio Fraile basin conservation.

**4.9 Fund creation previous background**
During the eighty and ninety decades, water users at Valle flat lands (growers, sugar mills, power generators, industry and potable water plant companies) along with environmental authorities, began organization processes for each hydrographical basin who pour their waters to Cauca rivers, especially those that are born at the Central Cordillera.

Therefore, Colombian sugar sector concerned by the environmental problematic has contributed to mitigation of environmental situations in their influence zone. The main strategy to work on middle and high basins has been through water user associations from different basins. Up to now, there are 16 river user associations who have been able to carry out activities in favor of water conservation, biological diversity and mountain living people's food security

River user associations have been able to attain investments with resources other than financing, such as sugar mills, CVC and CRC environmental authorities, Environmental and Childhood Action Fund, municipalities and particular persons who support micro-basin environmental activities.

Farmers' participation is an example, as taking care of the water has become a practice that improves their farms; therefore, they are interested in recovering in their properties forest remains and water streams.

Year 2008 draws the base line; during this year a logical framework methodology project is elaborated unifying concepts, defining goals and basin areas which are identified as priority for intervention. During the same year, the sugar sector begins a new process for creation of a fund for water conservation and protection. In addition, an exercise to resume environmental action developed by river Users' Associations in the influence area allowing a synthesis of the main work attainments in the last decades was carried out, as follows:

- 2,130 lineal kilometers of water stream bank isolations and water sources.
- 1,339 Isolated and/or recovered water sources.
- 2,450 hectares of natural restoration processes.
- 1'990,760 native trees sowed at the hydrographic basins.
- 6,968 hectares of vegetal coverage in processes of conservation and protection.
- 1,120 families directly benefitted.
- 191 Decontamination systems of residual domestic waters with familiar and educational centers septic tanks
- 27 Trained Agro Ecological Community Groups on cleaner production and initiatives of added value generation.
- 30 Community green houses established with a production of 100,000 trees per year.
- 120 Organizations duly formed and legally established.
- 21 rotary funds in function for sustainable production.

**4.10 Fund creation, memorandum of understanding**

Fund organization took some time, several clarifying, debating and agreement meetings were necessary by all parties. On one hand, cooperation agreements were signed with public entities, which due to their competence, they exercise environmental authority in their territory; and on the other hand, an understanding agreement was signed between private right strategic partners who contribute with resources and knowledge from their different social and economic roles.

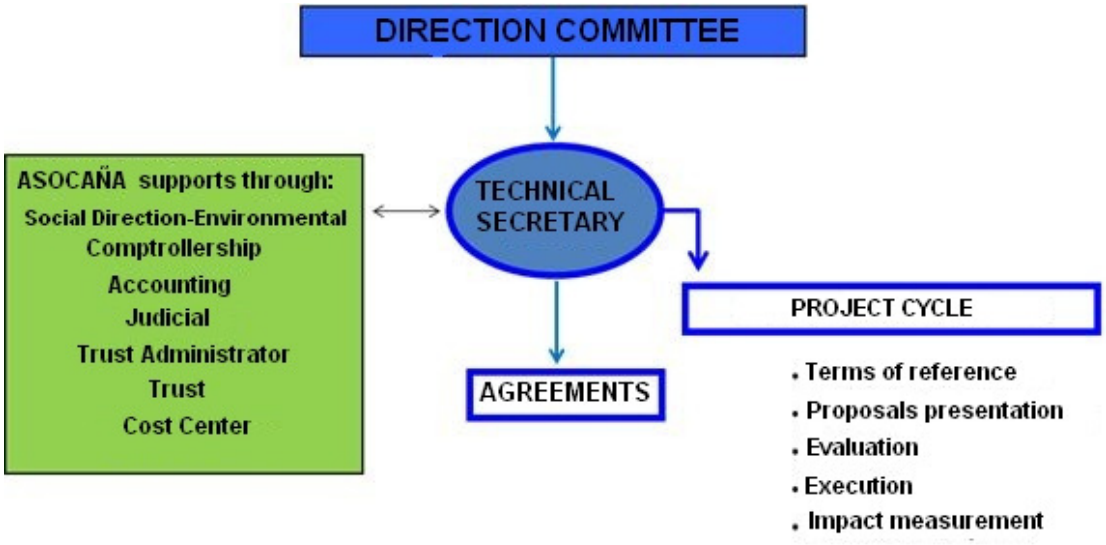
During 2009, an understanding agreement was signed and ratified by the following organizations: Colombian Sugar Cane Cultivators Association (ASOCAÑA), The Nature Conservancy (TNC); Amaime River Users' Association (ASOAMAIME); Nima River Users' Association (ASURNIMA); Surface and Ground Water of the Bolo River Association); Surface and Ground Water Users of the Desbaratado River Basin Association (ASODES); Users of Frayle River Association (ASOFRAYLE); Tulua - Molares River Foundation (FURTUMO); Valle del Cauca and Northern Cauca Development and Peace Corporation (VALLENPAZ); Colombian Sugar Cane Research Center (CENICAÑA); Palo River Users Corporation (CORPOPALO); Guabas River User Association (ASOGUABAS); Zabaletas River Users Association (ASOZABALETAS);

Colombian sugar Cane Growers and Suppliers Association (PROCAÑA); Bugalagrande River large scale land adequateness district users Association (ASORIBU); and Riofrio and Piedras rivers Foundation.

As of the date of signature of the understanding contract, leveraging of resources was initiated to have better availability of resources for intervention at the most deteriorated river basins.

**4.11 Operation**

The Fund is not a judicial person, is an agreement of willingness and cooperation that, having as legitimate basis a signed memorandum of understanding, called a General Assembly to elect the Direction Committee and the operating manual approval. The General Assembly decided to have a basic administrative scheme in which the trust administrator and the Fund Administration should be ASOCAÑA.




The Direction Committee was constituted by two Asocaña representatives, two water user association representatives, one TNC representative, one Procaña representative, one from Vallepaz, one from Cenicaña and one from the sugar mills. The direction Committee then approved the internal requirements and the processes and procedures of Fund operation.

By definition, the Fund in not a project executor, it leverages and manages resources to be applied to basins through local actors who know and have direct contact with communities living in those territories.

Fund application is carried out through open or closed convocation with terms of reference, including all conditions to be fulfilled the proponents when submitting projects.

One important content of reference terms is the inclusion of a set of indicators allowing the organizations, submitting proposals, to guide the definition of goals to be met, in case of proposal approval.

Investment types being carried out at the hydrographical basins are directly related with the indicator matrix this is composed by three large dimensions, namely:

- Hydrographical basins, (water)
- Social
- Sustainable production and nourishing security.

Therefore, some variables were defined for each dimension, and for each variable, the pertinent indictors were established. Chart No. 1 shows the indicator set with which the convocations have been called for application of Fund sources.

Table No. 1: Fund indicator set:

| DIMENSION | VARIABLES | INDICATORS |
|---|---|---|
| Hydrographical Basin (Water) | Water flow stability | 1. Vegetal cover change at intervened – protected basins |
| | | 2. Changes in the number on protected micro basins |
| | | 3. Change in the number of protected water sources |
| | | 4. Area and extent change of Riverside isolations of water streams, measured in kilometers of isolation |
| | | 5. Water stream flow changes |
| | | 6. Aquifer changes |
| Social | Environmental culture | 7. Changes in inclusion school centers, environmental education and adult training. |
| | | 8. Changes in resolution and prevention of environmental conflicts. |
| | Community strengthening | 9. Change in the number of benefitted families |
| | | 10. Training on citizen participation |
| | | 11. Base community organization |
| Sustainable production and alimentary security | Consolidation of sustainable productive systems | 12. Changes in the degree of adoption of sustainable practices. |
| | | 13. Changes in extent coverage, cattle farming reconversion (silvipasture) |
| | | 14. Changes in extent of multi-strata convocation agro forestry system coverage. |
| | | 15.Nourishing security modules |
| | | 16. Change of species richness on production systems (flora and fauna) |
| | | 17. Changes of vegetal stratification production systems. |
| | | 18. Changes on agriculture chemical use |
| | | 19. Payment for environmental services (compensations, incentives, others). |

**4.12 Goals and investment**

The type of investments being made at the hydrographical basins, show the goals detailed in the following table; therefore, the goals aim to the resolution of water category, social and sustainable production problematic situations.

It deals with important variables such as water stabilization, environmental culture, community strengthening, and sustainable productive systems, therefore, the Fund efforts are channeled to co-financing action on riverbank isolations, protection and recovery of water sources, reconversion of extensive cattle farming to more amiable operation with nature, nourishing security and people 'sensibilising and environmental training.

Up to now, they show the following indicators – goals on execution process during the period 2010 to 2012, in periods going from 12 to 18 months. Table No. 2 shows the forecasted goals to be met during the period 2009 - 2012.

Table No. 2, Main type of investments made at the basins

| **TOTAL AGGREGATED GOALS FOR 12 PROJECTS** | |
|---|---|
| INDICATOR | GOAL |
| Number of Kilometers of river bank isolations | 163.00 |
| Number of isolated and protected water stream sources | 151.00 |
| Number of conserved hectares (equivalent to the isolated kilometers) | 325.00 |
| Number of direct and trained benefitted families on handling of natural resources and sustainable production | convocation 371.00 |
| Number of trained families on handling on natural resources and sustainable production | 624.00 |
| Number of sowed native species trees | 85,008.00 |
| Number of hectares of extensive cattle farming reconversion to more amiable cattle farming with nature. | 91.50 |
| Number of community organizations strengthened in their organization and operational aspects. | 3.00 |
| Number of hectares protected and health support at NN Las Hermosas Park | 300.00 |
| Number of hectares of natural regeneration | 65.80 |
| Number of hectares of sustainable agricultural production | 8.00 |
| Number of modules of nourishing security | 213.00 |
| Number of functioning rotary Funds | 1.00 |
| Number of sensibilized educational centers on environmental issues | 9.00 |
| Number of hectares of deteriorated soils by mass moving processes (erosion) recovered through mitigation work. | 3.00 |

Fund investments made are shown in the following table, figures are given in Colombian pesos.

Table No. 3: Investment value for the forecasted goals.

| SUMMARY | Water for life Fund $ | Organizations $ | Ecopetrol, Town Councilss, FUPAD, PNN Las Hermosas – Others $ | Total $ |
|---|---|---|---|---|
| FIRST PROJECT 2009 | 99,958,000 | 10,000,000 | 99,970,530 | 209,928,530 |
| FIRST CONVOCATION 2010 | 499,519,900 | 352,383,130 | 259,000,000 | 1,110,903,030 |
| SECOND CONVOCATION 2010 | 675,300,000 | 569,553,000 | 242,000,000 | 1,486,853,000 |
| TOTAL | 1,274,777,900 | 931,936,130 | 600,970,530 | 2,807,684,560 |

Therefore, two convocations have been called up until March 30, 2011, for application of Fund resources. A total of 12 projects have been approved for a total of $2,807,684,560 Colombian pesos, equivalent to approximately US$ 1,579,000, out of which the Fund has contributed $1,274,777,900 Colombian pesos; the executing units have contributed as contrapatida $931,836,130 Colombian pesos and other organizations supporting social and environmental development projects have made direct contributions of $600,970,530 Colombian pesos, contrapartida contributions may be in cash, goods or services.

**5. Conclusions**

Water user associations are key actors on each basin. These associations, in turn, have sought in their territories strategic actors to carry out water conservation activities. On regions with presence of indigenous population, they have strategic alliances line Indigenous Town Councils. In other zones, there are alliances with local producers (veredales) and environment Non Governmental Organizations, ONG's. Therefore, a network of committed actors on hydrological basins recovery is being woven.

On the other hand, public and private organizations are working the social responsibility issue and have become strategic allied leveraging with resources the execution of projects; such is the case of Ecopetrol who have leverages resources for the execution of three projects.

With environmental authorities, CVC and CRC, Valle del Cauca and Cauca autonomous corporations, mutual cooperation agreements have been established. With the administrative unit of Colombia natural national parks, in the case of Las Hermosas National Park, the leverage of two projects at Nima – Amaime and Tulua rivers has been attained.

Once in execution, the process of accompaniment is dome through technical, accounting and financial comptrollerships. They watch fulfillment of goral and that resources committed for the project are correctly managed.

In so far as the monitoring of environmental, hydrologic, social and economic impacts I concerned, at the moment work is being done in the field of design of an impact monitoring protocol for three categories:

- Hydrologic variables,
- Biological diversity variables,
- Socioeconomic variables.

Sustainability is analyzed from two optics; one from the viewpoint of actions with direct beneficiaries and other, from the point of view of Fund sustainability.

The first one, all actions should be concertized with rural property owners from the moment of project formulation. Conservation and production actions in progress, directly benefit rural property owners as they also need to recover pr protect water streams to value their farms, they require making cattle farming more profitable and in many cases they leave in operation nourishing security modules. Interventions are done on areas where water is required to serve the rural township water plants. On the other hand, it should be pointed out to clarify that conservation agreements, in most cases, are done in good faith and in some other cases, contracts are signed between the parties.

The fundamental basis is given on sensibilising and training processes where clarifications are made. Activities are carried out by mutual agreement and in good faith between the parties, but specially, keeping in mind the rural property owner's interest that once carried out all the conservation activities, his wellbeing will be more satisfactory. The process does not require signature of any document.

To look for the Fund sustainability, procedures are being done to constitute a non extinguishable capital patrimonial Fund allowing, over time, guarantee of a basic administration and have available resources leveraging compensations.

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