

Template

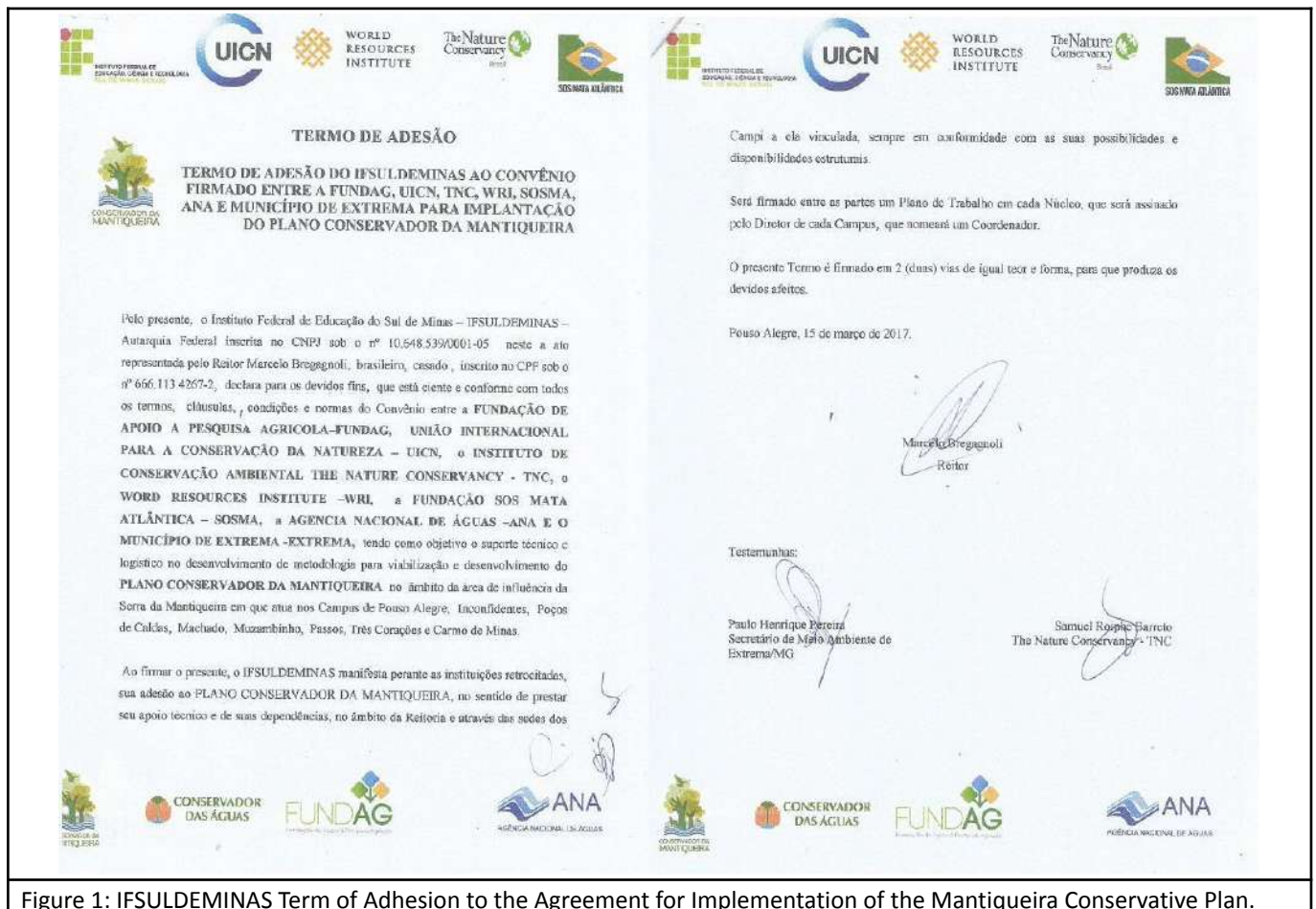
for Evidence(s)

UI GreenMetric Questionnaire

University : IFSULDEMINAS
Country : BRAZIL
Web Address : <https://www.ifsuldeminas.edu.br/index.php>

[4] Water (WR)

[4.1] Water Conservation Program Implementation



TERMO DE ADESÃO

TERMO DE ADESÃO DO IFSULDEMINAS AO CONVÊNIO FIRMADO ENTRE A FUNDAG, UICN, TNC, WRI, SOSMA, ANA E MUNICÍPIO DE EXTREMA PARA IMPLANTAÇÃO DO PLANO CONSERVADOR DA MANTIQUEIRA

Pelo presente, o Instituto Federal de Educação do Sul de Minas – IFSULDEMINAS – Autarquia Federal inscrita no CNPJ sob o nº 10.548.539/0001-05 neste ato representada pelo Reitor Marcelo Bregagnoli, brasileiro, casado, inscrito no CPF sob o nº 656.113.4267-2, declara para os devidos fins, que está ciente e conforme com todos os termos, cláusulas, condições e normas do Convênio entre a FUNDAÇÃO DE APOIO A PESQUISA AGRÍCOLA-FUNDAG, UNIÃO INTERNACIONAL PARA A CONSERVAÇÃO DA NATUREZA – UICN, o INSTITUTO DE CONSERVAÇÃO AMBIENTAL THE NATURE CONSERVANCY - TNC, o WORLD RESOURCES INSTITUTE –WRI, a FUNDAÇÃO SOS MATA ATLÂNTICA – SOSMA, a AGENCIA NACIONAL DE ÁGUAS –ANA E O MUNICÍPIO DE EXTREMA -EXTREMA, tendo como objetivo o suporte técnico e logístico no desenvolvimento de metodologia para viabilização e desenvolvimento do PLANO CONSERVADOR DA MANTIQUEIRA no âmbito da área de influência da Serra da Mantiqueira em que atua nos Campuses de Pouso Alegre, Inconfidentes, Poços de Caldas, Machedo, Muzambinho, Passos, Três Corações e Carmo de Minas.

Ao firmar o presente, o IFSULDEMINAS manifesta perante as instituições retrocitadas, sua adesão ao PLANO CONSERVADOR DA MANTIQUEIRA, no sentido de prestar seu apoio técnico e de suas dependências, no âmbito da Reitoria e através das sedes dos

Campi a ele vinculada, sempre em conformidade com as suas possibilidades e disponibilidades estruturais.

Será firmado entre as partes um Plano de Trabalho em cada Núcleo, que será assinado pelo Diretor de cada Campus, que nomeará um Coordenador.

O presente Termo é firmado em 2 (duas) vias de igual teor e forma, para que produza os devidos efeitos.

Pouso Alegre, 15 de março de 2017.

Marcelo Bregagnoli
Reitor

Testemunhas:

Paulo Henrique Pereira
Secretário de Meio Ambiente de
Extrema/MG

Samuel Roque Barreto
The Nature Conservancy - TNC

Figure 1: IFSULDEMINAS Term of Adhesion to the Agreement for Implementation of the Mantiqueira Conservative Plan.



Figure 2: First meeting of the Mantiqueira Conservative Plan at Campus Poços de Caldas.



Figure 3: IFSULDEMINAS gathers NGOs and municipalities to make feasible the Mantiqueira Conservative.



Figure 4: Meeting between Campus and Inconfidentes City Hall.



Figure 5: Forest Restoration Course at Muzambinho Campus.

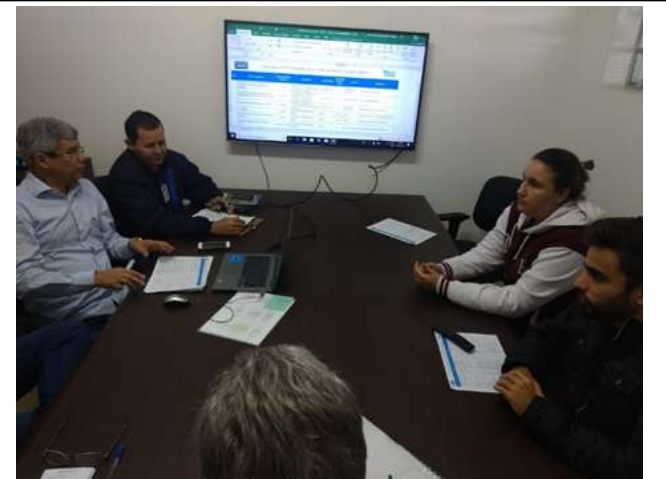


Figure 6: Pro-Mananciais Meeting.



Figure 7: "Our Water, Our Future" Project presentation.



Figure 8: Course "New opportunities in reforestation: financial income and increased water in rural property".



Figure 9: Campus Muzambinho actions to improve the quality of drinking water.



Figure 10: Muzambinho Campus IFRefloresta Project.



Figure 11: Inconfidentes Campus recovery and transformation of pasture area in ecological corridor and isolation of pasture area with erosion for natural regeneration.



Figure 12: Inconfidentes Campus implementation of the Demonstration Unit for Forest Restoration.



Figure 13. Inconfidentes Campus monitoring of the Demonstration Unit of Forest Restoration after 8 months (August 2020).



Figure 14: Inconfidentes Campus recovery of the riparian forest of the Mogi Guaçu River at the Farm School.



Figura 15: Inconfidentes Campus ecobarrier installed on the Mogi Guaçu River.



Figure 16: Inconfidentes Campus location of springs in the Farm School area.



Figure 17: Machado Campus spring recovery.



Figure 18: Machado Campus recovery of water sources.



Figure 19: Machado Campus [drone designed to monitor water quality.](#)



Figure 20: Carmo de Minas Campus water storage cisterns with a capacity of 80,000 liters.



Figure 21: Muzambinho Campus Forest Restoration Course, promoted by the Mantiqueira Conservative Project.



Figure 22: Machado Campus fencing and planting trees to recover water sources.



Figure 23: Muzambinho Campus actions in favor of the conscientious consumption of water resources.



Figure 24: Inconfidentes Campus monitoring of the Demonstration Unit in Forest Restoration (after 12 months)



Figure 25: Inconfidentes Campus monitoring of the Demonstration Unit in Forest Restoration (after 19 months, August 2021).

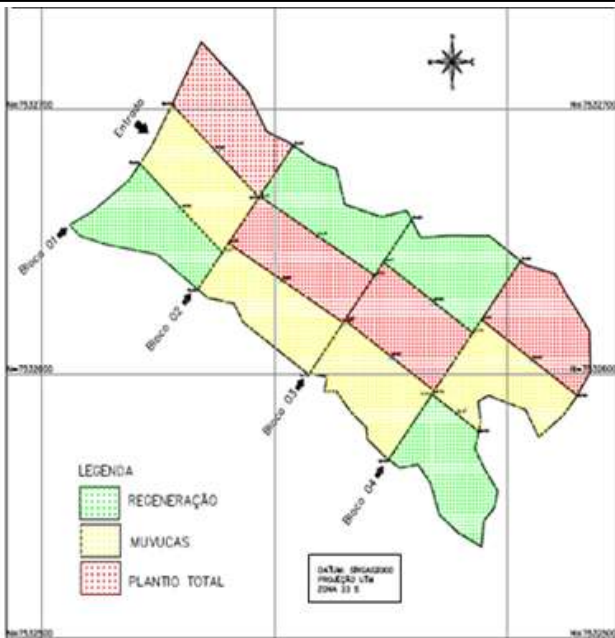


Figure 26: Inconfidentes Campus twelve sampling units of the Demonstration Unit in Forest Restoration.



Figure 27: Inconfidentes Campus [1st Seminar "Mantiqueira Restoration" - Opportunities, Challenges, Teaching, and Extension in the Decade of Restoration.](#)



Figure 28: Machado Campus planting native seedlings.



Figure 29: Machado Campus revitalization of springs.

Description

Figure 1: IFSULDEMINAS Term of Adhesion to the Agreement for Implementation of the Mantiqueira Conservative Plan

Since March 2017, IFSULDEMINAS have an agreement to implement the [Mantiqueira Conservative Plan](#). There are already several actions on campuses in relation to the plan, with emphasis on the implementation of the

Demonstration Unit at Inconfidentes Campus in December 2019, which is an area of 1.5 hectares where three techniques for restoring native vegetation are studied (muvuca, planting direct and conduction of natural regeneration).

Figure 2: Campus Poços de Caldas holds the first meeting of the Mantiqueira Conservative Plan

IFSULDEMINAS - Poços de Caldas Campus, in partnership with the Environment Secretariat of Extrema, is executing the Mantiqueira Conservative project, which is an expansion plan for the Conservative Water Project, held in Extrema. The project is 10 years old and was awarded internationally, being a reference for all of Brazil, having support from several national and international institutions.

Figure 3: Mantiqueira Conservative Plan and Water Conservative Plan

Through a partnership between the Institute, the City Council of Extrema, the Research Support Foundation, the International Union for Conservation of Nature, The Nature Conservancy (TNC), the World Resource Institute (WRI), the SOS Mata Foundation Atlântica and the National Water Agency, the eight IFSULDEMINAS campuses became nuclei of the project with the objective of guiding and guiding the actions in their areas of coverage.

The main objective of the Mantiqueira Conservancy Plan (PCM) is to promote forest restoration of native species in about 1,200,000 hectares in the area of influence of the Serra da Mantiqueira in the more than 280 municipalities of the States of Minas Gerais, São Paulo and Rio de Janeiro of January, using the expertise of the municipality of Extrema in the implementation of the Conservative Water Project, the first Brazilian experience of forest restoration project using the PSA mechanism, as well as support for the implementation of the Atlantic Forest Municipal Plan (PMMA). Available at: <https://portal.ifsuldeminas.edu.br/index.php/ultimas-noticias-ifsuldeminas/78-noticias-da-prodi/1581-conservacao-ambiental>.

Figure 4: Meeting between Campus and Inconfidentes City Hall discusses draft law of the Mantiqueira Conservative

Plan and Meeting discusses proposals for legislation that will regulate the Mantiqueira Conservative Plan in Municipalities. Available at: <https://inconfidentes.mg.gov.br/noticias/533-equipe-discute-minuta-de-lei-para-implantacao-de-projeto-conse rvador-das-aguas.html>.

Figure 5: IFSULDEMINAS- Campus Muzambinho receives final stage of the forest restoration course of the Mantiqueira Conservative Project

The Muzambinho Campus held the Forest Restoration Course, promoted by the Mantiqueira Conservative Project. In addition to professors, IFSULDEMINAS administrative technicians, the event was attended by environmental secretaries from cities in the region, representatives of the Association of Municipalities of the Mogiana Microregion (AMOG) and NGOs related to environmental preservation. The objective of the course was to train IFSULDEMINAS technicians and people related to environmental preservation in the Serra da Mantiqueira Region, so that they are multipliers of the course in their municipalities of origin, having as main object the Mantiqueira Conservative Plan. Source: IFSULDEMINAS.

Figure 6: IFSULDEMINAS is COPASA's partner in the "Pro Mananciais" Program

The Pro Mananciais is based on the previous programs of protection of springs of the COPASA, legislation, national and state documents and the "Cultivating Good Water" Program of the State of Minas Gerais. The program has in its conception: the culture of sustainability; awareness raising, mobilization and environmental education actions; valuing knowledge and beliefs of communities; encouragement to change habits and customs; ethics of care; the collective construction of the sense of belonging to the hydrographic microbasin; and shared responsibility. Source: IFSULDEMINAS.

Figure 7: "Our Water, Our Future" Project presentation

IFSULDEMINAS representatives participated in the presentation of the project "Our Water, Our Future", from Pouso Alegre (MG), for rural producers in the city. IFSULDEMINAS is one of the project partners, together with Emater-MG and the international organization The Nature Conservancy. This was the fourth presentation of the project in central rural neighborhoods of Pouso Alegre and about 80 producers were present during these meetings. Available at:

<https://portal.ifsuldeminas.edu.br/index.php/ultimas-noticias-ifsuldeminas/115-teste-noticias-gerais/2776-sustentabilidade>.

Figure 8: Course "New opportunities in reforestation: financial income and increased water in rural property"

The course is destined primarily to municipal managers and students. Let's work to conserve our forests and waters! Available at: <https://portal.ifsuldeminas.edu.br/index.php/noticias/721-ate-2-de-agosto>.

Figure 9: Campus Muzambinho actions to improve the quality of drinking water

Since the construction of the Water Treatment Plant, several actions have been taken to provide better water quality on campus. Comparing the images, it is clear that the permanent protection area was already in a very advanced reconstruction process. Available at: <https://www.muz.ifsuldeminas.edu.br/ceam2/265-ceam-artigos/2333-aco-es-para-a-melhoria-na-qualidade-da-agua-para-o-consumo-na-instituicao>.

Figure 10: Muzambinho Campus IRefloresta Project.

The IRefloresta Project was created through initiatives by civil servants who defend environmental causes, with the objective of conserving and restoring the campus water resources through the forest restoration of the permanent preservation areas of the campus.

Figure 11: Inconfidentes Campus recovery of degraded areas

Ecological corridor of forest located close to swine. The area (1.7 ha) was enclosed between the two fragments, in addition to the construction of terraces and water dams upstream of the area in order to reduce the speed of runoff that descended in the area to be regenerated. The area has been regenerating naturally since 2016.

Recovery of degraded pastures and the presence of erosion in furrows right of the road that cuts through the School Farm to reach the dairy cattle sector. The area of 1.52 hectares was surrounded to allow natural regeneration in 2016 and in December 2019 a demonstration unit was implemented to assess the potential of three techniques for the recovery of degraded areas (natural regeneration, planting of seedlings and muvuca) with potential for restoration of the forest within the area of influence of the Mantiqueira Conservative Plan.

Figures 12 and 13: Inconfidentes Campus implementation of the Demonstration Unit for Forest Restoration

In December 2019, a Demonstration Unit for Forest Restoration was installed at Inconfidentes Campus School Farm, with an area of 1.52 hectares, which will serve as a laboratory to check how nature reacts to different reforestation techniques. The initiative is part of the Mantiqueira Conservative Plan, being the third area implemented in Brazil in 2019.

Figure 14: Inconfidentes Campus recovery of the riparian forest of the Mogi Guaçu River at the Farm School

Recovery of riparian forest on the Mogi Guaçu River, in 2017, with the planting of 300 seedlings of native species.

Figura 15: Inconfidentes Campus ecobarrier installed on the Mogi Guaçu River

Ecobarrier installed on the Mogi Guaçu River, to collect larger waste.

Figure 16: Inconfidentes Campus location of springs in the Farm School area

Inconfidentes Campus School Farm has eight cataloged springs: 5 (five) of them are preserved and 3 (three) are disturbed, but none degraded.

Figure 21: Muzambinho Campus Forest Restoration Course, promoted by the Mantiqueira Conservative Project

The Muzambinho Campus held the Forest Restoration Course, promoted by the Mantiqueira Conservative Project. In addition to professors, IFSULDEMINAS administrative technicians, the event was attended by environmental secretaries from cities in the region, representatives of the Association of Municipalities of the Mogiana Microregion (AMOG) and NGOs related to environmental preservation. The objective of the course

was to train IFSULDEMINAS technicians and people related to environmental preservation in the Serra da Mantiqueira Region, so that they are multipliers of the course in their municipalities of origin, having as main object the Mantiqueira Conservative Plan. Available at: <https://muz.ifsuldeminas.edu.br/index.php/gerais/5957-conservador-da-mantiqueira>.

Figure 23: Muzambinho Campus actions in favor of the conscientious consumption of water resources

To ensure the efficient use of water resources in the institution, IFSULDEMINAS – Campus Muzambinho has created a series of actions to save, control and treat water sources and raise awareness. Available at: <https://www.muz.ifsuldeminas.edu.br/noticias/3462-no-dia-mundial-da-agua-conheca-nossas-acoes-em-prol-do-consumo-consciente-de-recursos-hidricos>