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Analysis of the Objectives of a Sustainable Use Conservation Unit: Application of the "Objectives Module" of the RAPPAM Method - Rio Ouro Preto Extractive Reserve

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Abstract— *This study examines the following problem: "What does the management plan (conservation management document) indicate about the objectives of a conservation unit (CU), according to indicators in the 'Module - Objectives' from the RAPPAM method - world reference in evaluating the effectiveness of CU management?" The goal is to characterize the "objectives" of a sustainable use CU based on 8 indicators from the RAPPAM method. The study was applied to the Rio Ouro Preto Extractive Reserve, located in the Amazon. Some results deserve to be highlighted: the indicator "biodiversity" being absent in the objectives of the plan harms the CU in its master function: sustainability; the indicators "plans" and "projects" showed a wealth of detail; the indicators "employees", "managers" and "policies" revealed a frightening reality: a lack of human resources; the indicator "local communities" revealed satisfactory participation. The management plan was deficient with its main objectives: strategic ones. They are of great importance because they are considered the highest priority according to the needs of the community. The study suggests a readjustment of the objectives, under penalty of undermining the objectivity of the management plan and sustainable development of the Exres. The study allows for the application of the method in other CUs, since all management plans have "objectives" in their textual structure. The scientific relevance of this study is justified in view of the sustainability of other CUs, since the management plan, as well as the objectives contained in the textual structure of the document, are common to all.*

Keywords— ***Management Effectiveness. Management Plan. Sustainability. Objectives of Sustainable Use CU.***

I. INTRODUCTION

This study analyzes the objectives of a federal sustainable use conservation unit (CU), in the state of Rondônia, northern Brazil, the Rio Ouro Preto Extractive Reserve (ROP EXRES). The objectives of an area destined for environmental protection should be established according to the natural resources that it has, since they are the main motive for which action is established to protect and preserve a certain area, like sustainable use conservation units.

Due to the importance of sustainable use conservation units, not only for Brazil but for the world, the objectives set out in the management plans of these types of conservation units should consider the broader scope, in order not to leave gaps in their intended actions. In order to be as complete as possible, a viable guideline is to think of goals that include at least three segments: environmental, social and economic. In the case of extractive reserves, such as the Rio Ouro Preto Extractive Reserve, located in the Brazilian Amazon, a sustainable use conservation unit, the objectives take on an even greater proportion, because they have distinct characteristics, are unique, and are only found in Brazil. Although they are relatively small areas, EXRES can influence and interfere with the environmental dynamics of the entire planet.

The objectives of ROP EXRES are important, not only for environmental protection across the globe, but to promote the well-being of society in general and the local community, composed of people called "extractivists". These people, in turn, will also be affected by the way the

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unit is run. The objectives are thus decisive for the future of the globe, the extractivists and humanity as a whole.

This study seeks to answer six (6) questions about the "objectives" of the CU and characterize these objectives related to eight (8) indicators found in the RAPPAM method questionnaire, namely:

1) Protection;
2) Conservation;
3) Biodiversity;
4) Plans and projects;
5) Employees and managers;
6) Policies;
7) Local communities;
8) Management Board.

The above indicators were identified in Module 6 – "Objectives" of the RAPPAM method questionnaire which comprises the following questions:

a) Do the PA objectives provide for the protection and maintenance of biodiversity?
b) Are specific biodiversity-related objectives clearly stated in the management plan?
c) Are management policies and plans consistent with the PA objectives?
d) Do PA employees and administrators understand the PA objectives and policies?
e) Do local communities support the overall objectives of the PA?
f) Do the members of the PA's management board understand the objectives and policies of the PA?

The above questions were taken from a global method for evaluating the effectiveness of protected area management, used in Europe, Asia, Africa, Latin America, the Caribbean and other locations: the "Rapid Assessment and Prioritization of Protected Area Management" (RAPPAM) method. The questions were answered from the document entitled "Rio Ouro Preto Extractive Reserve Management plan/RO – 2014", which is the largest legal framework establishing the management of ROP EXRES.

In a statement, on May 10, 2017, WWF-Brazil reported on its official webpage that RAPPAM had already been used in more than 250 state conservation units and 292 federal conservation units in Brazil alone. The data indicate that throughout Brazil more than 80% of CUs are assessed using this tool (WWF-BRAZIL, 2017).

The theoretical construction was based on the following problematization:

Importance of a CU's objectives – What does the management plan indicate about the objectives of a CU, according to the indicators from the "Objectives Module" of the RAPPAM method – world reference for evaluating the effectiveness of protected area management?

The management plan for ROP EXRES was designated as the sample object of study to represent the problem. Since then, the problem studied has presented the following question: "What does the 2014 ROP EXRES Management Plan "indicate about the objectives of this unit, according to the 8 indicators in the "Objectives Module" of the RAPPAM method?"

The study is of utmost importance since ROP EXRES is in the midst of its first management plan created in 2014, which instituted a Management Agreement including "strategic objectives" set to take effect in the five-year period between 2014 and 2018, after which it was supposed to go through re-elaboration and reevaluation. The reworking of these objectives can include, based on the results of this study, the following aspects of the strategic objectives of the management plan:

a) objectives that need to be improved, supplemented or restated;
b) objectives that need to be deleted;
c) new objectives that can be included;
d) objectives that can remain the same as they have proven to be effective.

Thus, this study is justified scientifically to be able to contribute to the analysis of all involved in the process of updating the ROP EXRES management plan, as well as other management plans for other CUs, mainly because it is a thematic refocus linked to all the modalities of a CU: the "objectives".

The benefits of the study are justified by the care taken to preserve the environment, which largely affect not only the global population, but also the physical environment of the planet Earth. It will, therefore, apply to the survival of life on the planet and preservation of the globe itself.

The presentation of the study is organized in order to characterize the object of study, in order to contextualize its location, its creation and the current situation as well as to show its current and future needs. Discussions follow about the objectives that serve as a guideline for conducting the analysis, namely those related to the 8 indicators referenced by the RAPPAM method.

The source and the operating dynamics of the RAPPAM method are also explained throughout the developing text. The text is noteworthy because it is based on an international parameter adopted by most countries that are dedicated to preserving conservation units across the globe.

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II. METHODOLOGY

Since the ROP EXRES management plan has been in place for only four years (start of term: 2014), this study analyzed the characteristics of ROP EXRES objectives present in the management plan of this CU, because it is one of the most important elements of this protected area. The authors sought answers to the questions from "Module 6 - Objectives" of the RAPPAM method, throughout the document entitled " Rio Ouro Preto Extractive Reserve/RO Management plan ", since the document is the legal framework in which the goals of linked to ROP EXRES should be contained.

The study analyzed the goals of one of the most important protected areas in the Amazon region in Brazil: ROP EXRES. As a federal unit, its location deserves attention since it's located in the border area between Brazil and Bolivia, suggesting possible invasion, exploitation and pillaging of its environment; also, this unit was one of the first protected areas created in Brazil (03/13/90), more specifically the fourth of its kind. The first was the Alto Juruá EXRES (Acre - on 01/23/90); the second was the Chico Mendes EXRES (Acre - on 03/12/90) and third was the Cajari River EXRES (Amapá – on 03/12/90).

The theoretical construction was based on the following questioning: What does the ROP EXRES "Management Plan - 2014" indicate regarding the objectives of this unit, according to the 8 indicators in "Module 6 - Objectives" of the RAPPAM method?

The methodology used to produce the data gains its theoretical basis in the foundations of Goncalves (2007). According to the author, a study can be classified according to the segments that structure it:

a) its objectives;
b) its data collection procedures;
c) its sources;
d) the nature of the data collected.

Thus, this study is embodied in the following classifications:

2.1 According to its objectives, this is a - Descriptive Study

According to the objectives of this study it presents itself as descriptive because its object of study is detailed by descriptions. The analysis is not exhaustive, but it objectively explores a descriptive presentation of the object of study in question.

This type of study is responsible for updating the reader on a particular object of study, about which little information is previously known. In this sense, a description of the object's characteristics is extremely useful since it produces data that contributes to other types of analyses, which would not be possible without having first occurred a description of the phenomenon.

In this study the object to be described is the objectives of the CU ROP EXRES according to its 2014 management plan, in light of the questions present in the RAPPAM method questionnaire, specifically six (6) questions from Module 6 entitled "Module 6 - Objectives".

2.2 According to its data collection procedures this is a – Documentary Study

The procedures used to produce data in this study were based on the following steps:

Step 1 - Documentary study 1 (one) entitled:

Document 1: " Rio Ouro Preto/RO Extractive Reserve Management Plan- 2014" to identify all the parts of the plan that address the objectives ROP EXRES;

Step 2 - further studies on documents two (2) and three (3) entitled:

Document 2: "Effectiveness of Federal Protected Area Management - comparative evaluation of applications of the RAPPAM method in federal conservation units in cycles from 2005 to 2006 and in 2010 - Full version of the report - February 2012;

Document 3: Management Assessment of Protected Areas: RAPPAM (2015) and SAMGE methods (2016).

Step 3 - application of "Module 6 - Objectives" from the RAPPAM method questionnaire: search for answers in the aforementioned document 1, the management plan, guided by the 8 (superscript bold below) indicators found in the survey questions from the RAPPAM method:

a) Do the goals of the CU include **protection**[1] and **conservation**[2] of biodiversity?
b) Are the specific objectives related to **biodiversity**[3] clearly stated in the management plan?
c) Are the **plans** and **projects**[4] consistent with the goals of the CU?
d) Do the CU's **employees**[5] and **administrators**[5] understand the objectives and **policies**[6] of the CU?
e) Do the **local communities**[7] support the goals of the CU?
f) Do the members of the CU's **management board**[8] understand the objectives and policies of the CU?

Step 4 - description of the solutions found in the PA's management plan regarding the objectives of ROP EXRES through the development of a subsection for each question (Part 1/2 of this article);

Step 5 - record, along with the description of the previous step, of external theoretical contributions to the Management Plan (books, papers, theses, dissertations) in

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order to compare the data obtained (Part 2/2 of this article).

Since 4 of the 5 steps outlined above are based on the study and use of institutional documents, called primary sources, i.e., official publications produced by government agencies or organizations in general, in order to predominate the primary sources in data surveys, it is said that this type of study is documentary research.

2.3 According to the sources of information this is a – Documentary Study

Based on the same reasoning set forth in the previous paragraph, this study is outlined as documentary research, due to the fact that the sources from which the data were extracted are original publications from institutional bodies. In this case, the data obtained from the ROP EXRES management plan, was thus processed and analyzed because it constitutes the official document in which the Management Agreement between all parties involved in this CU is found.

2.4 Based on the nature of the data this is a - Qualitative Study

Finally, the data collected acquire one of two possible definitions, according to the nature thereof: they are either defined as quantitative or qualitative data.

Quantitative data refers to those that are intended to characterize experiments numerically, statistically or through percentages, and assign them values in order to present numeric order in the data. Another allocation of quantitative data is that they are used to infer the cause of the phenomena; therefore, experiments are handled in a controlled manner through which hypotheses and their variants are tested as many times as is needed in order to prove validation of the results.

In turn, qualitative data is data concerned with interpretation of the phenomenon, in order to establish relations between it and the means through which it comes about, or in order to establish relations between the understanding that people have of the phenomenon and the medium in which it is inserted.

Based on the previous paragraph, this study is defined as qualitative research taking on a hermeneutic approach, where interpretations are made about the contents and principles present in legal texts, in this case in particular, the legal document entitled "2014 Rio Ouro Preto Extractive Reserve Management Plan /RO".

In the ROP EXRES management plan what the community and those involved in its formulation put in the text was the meaning of their practices in relation with this CU. This is in line with a qualitative study.

2.5 About the RAPPAM method:

Concerned about degradation in protected areas, the IUCN created the World Commission on Protected Areas (WCPA); in 1995, the committee brought together researchers in various specialties to obtain as much information as possible in order to develop guidelines aimed at environmental protection. With the information obtained a framework was established that served as a reference for the development of various methods of evaluation of the management of protected areas, taking into consideration three main aspects: a) planning; b) implementation b) evaluation.

Based on this framework the World Wide Fund for Nature (WWF) developed the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM), a tool designed to assist managers of protected areas. It identifies the strengths of the units as well as their weaknesses that need to be improved by managers, through a fast and efficient evaluation. Managers, based on the analysis of these points may develop appropriate public policies for the protection of natural resources in the units.

Administration of a natural area requires the effort and dedication of those who are working directly or indirectly towards its development, and since it is an area of great importance, it draws the attention of institutions around the world like WWF. The concern to protect and conserve biodiversity is not just present in Brazil but around the world, it is currently a theme for international Congresses and scientific studies; this concern has gotten the attention of authorities, local leaders and NGOs such as WWF which is integrated in the same network as WWF Brazil. WWF Brazil is part of one of the largest environmental conservation networks in the world, seeking to minimize the negative impacts of human activities through the protection of biological diversity within the Brazilian territory.

With the support of universities, NGOs and other institutions, WWF Brazil contributes to the development of the country, developing projects since 1996, the year of its creation. It includes among its operating axes projects fighting against environmental degradation and towards the development of alternatives to reverse this problem. In this context, protected areas play a key role (WWF, 2012).

Since the year of its creation in 2002, and because of the good results obtained, the RAPPAM method has already been applied in over 50 countries, in protected areas of Europe, Africa and other continents. Its application was first performed in Brazil in 2004, to evaluate the effectiveness of some protected areas:

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Ribeira Valley, Paraíba Valley, Serra da Mantiqueira, Upper Paranapanema and the metropolitan area of the capital, located in the state of São Paulo. But it wasn't until 2005 that it was applied in federal units in the Amazon.

Between 2005 and 2006 it was possible to apply the RAPPAM method for the first time in federal conservation units, located in the Amazon region, through a partnership established between WWF Brazil and IBAMA, the body responsible for managing the units prior to the creation of ICMBio. ROP EXRES was evaluated using the RAPPAM method in the three cycles during which the method was applied in Brazil: in 2005, 2010 and 2015.

Evaluation of management effectiveness as proposed in the RAPPAM method seeks to show that the actions taken meet the needs of the evaluated protected areas in order to ensure that its objectives are achieved. The method's questionnaire is based on five elements of the planning, management and evaluation cycle (context, planning, inputs, processes and results); each element is composed of specific topics covered in different themed modules. The following table clearly shows how each topic is constituted:

Table 1 - Structure of the RAPPAM questionnaire

Elemento	Módulo temático
Contexto	1. Perfil
	2. Pressões e ameaças
	3. Importância biológica
	4. Importância socioeconômica
	5. Vulnerabilidade
Planejamento	6. Objetivos
	7. Amparo legal
	8. Desenho e planejamento da área
Insumos	9. Recursos humanos
	10. Comunicação e informação
	11. Infraestrutura
	12. Recursos financeiros
Processos	13. Planejamento
	14. Processo de tomada de decisão
	15. Pesquisa, avaliação e monitoramento
Resultados	16. Resultados

Source: WWF-Brazil, 2012, p. 12.

The RAPPAM survey, based on CMAP, is divided into five (5) elements, namely: a) context; b) planning; c) inputs; d) processes and e) results. Each questionnaire element is directed towards specific areas called thematic modules; each thematic module consists of questions about the reality of the protected area. Responses are applied to employees and the community involved with the protected area. That way a sense of the unity of the state of development is ascertained, through analysis and discussion of the modules.

The RAPPAM method evaluates the management effectiveness of protected areas and has a mathematical formula to calculate the index of this effectiveness. Since management is not the focus of this study the details of this calculation will not be described herein. This study aims to analyze the objectives of ROP EXRES. The questions contained in the RAPPAM method questionnaire were used for this purpose, because it is a method that is recognized worldwide and because it analyzes basic elements related to protected areas.

In the structure of the RAPPAM questionnaire, the "Planning" element contains three thematic modules, namely:

a) Module 6 - Objectives;
b) Module 7 - Legal Support &
c) Module 8 - Design and planning of the area.

The theme found in module 6 - "Objectives" was chosen as the central focus of this study; this module, in turn, addresses the following questions:

a) Do the PA's objectives include protection and conservation of biodiversity?
b) Are there specific objectives related to biodiversity clearly stated in the management plan?
c) Are the plans and projects consistent with the goals of the CU?
d) Do the CU's employees and directors understand the objectives and policies of the CU?
e) Do local communities support the goals of the CU?
f) Do the members of the CU's management board understand the objectives and policies of the CU (2010 only)?

In section 3, all the kinds of goals found and identified in the ROP EXRES Management Plan will be described, along with the context of their creation, and the historical period in which they were formulated. The way they are described in the Management Plan can interfere with the interpretation and understanding thereof, as witnessed at the conclusion of the analyzed data. The analysis leads to the conclusion about how it is necessary to pay attention to the quality of the presentation of the Management Plan's objectives. A presentation devoid of clear and objective language prevents assimilation of the objectives and compliance with them, damaging the sustainability of the CU.

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III. DESCRIPTION OF THE OBJECTIVES OF ROP EXRES PRESENT IN ITS MANAGEMENT PLAN

In the analysis of the ROP EXRES management plan six (6) types (categories) of objectives were identified in the document:

a) **specific objectives** related to the CU ROP EXRES;

b) a **general objective** regarding the general program "Environmental and Socioeconomic Sustainability Programs " (PSAS) of the Unit;

c) **"common" objectives** for the programs contained in the aforementioned general program;

d) **"common" objectives** referring to the sub-programs that make up the overall program;

e) **"common" objectives** for the "Management Agreement";

f) **strategic objectives** relating to the subprograms (as cited in "d" above).

The amount of objectives varies greatly and the chain of creation and redesign thereof is between the years 1990 and 2013. New adjustments and updates of the objectives are planned for the year 2019.

Altogether, 53 (fifty-three) goals are present in the 2014 ROP EXRES management plan, which are thus distributed according to their categories and formulation dates:

a) five (05) **specific objectives** related to the CU ROP EXRES formulated at the time that ROP EXRES was established on 03/13/1990;

b) one (01) **general objective** related to the general program of PSAS formulated through participatory workshops in 2009 and also reformulated in a workshop held in April/2013;

c) 04 (four) **"common" objectives** referring to 05 (five) programs contained in the aforementioned general program. Preparation: participatory workshops in 2009; Update: Workshop in April/2013;

d) 21 (twenty-one) **"common" objectives** referring to the 21 (twenty-one) subprograms contained in 05 programs that shape the overall program. Preparation: participatory workshops in 2009; additions: Workshop in April/2013;

e) two (02) **"common" objectives** for the "Management Agreement" formulated at the general meeting on August 29 & 30, 2010;

f) twenty (20) **strategic objectives** related to the subprograms ("d" above). Elaborated at the Participatory Planning Workshop in April/2013.

Regarding the formulation of objectives found in the Management Plan it can be said that preparation of the six (6) types always counted on the participation of internal members of the CU: residents and the local community (sometimes only parents live in the reserve, while their children live in the city). The intervention of external members refers to agencies and institutions directly and legally linked to the management of extractive reserves, such as ICMBio. One external member to ROP EXRES who is contained in the management plan is registered as a consultant: Dr. Simone Vieira de Campos. The following sections contain descriptions of the objectives found therein:

3.1 Specific objectives concerning the CU ROP EXRES

The first objectives included in the management plan are the specific objectives of ROP EXRES as a whole. These objectives were first recorded in the 2014 management plan for the reserve. They were attained from the memories and oral contributions of residents of the Exres in a workshop held in April/2013, entitled Participatory Workshop (BRAZIL, 2014, p. 137). These objectives date back to the time when the Exres was created on 03/13/1990; however, this data was not included in any document until the management plan was published in 2014.

The specific objectives appear two (02) times in the 2014 ROP extractive reserve management plan, on pages 17 and 137. Altogether there are five (05) specific objectives:

a) Ensure free work area for the extractivists with no bosses;

b) Avoid invasions in the extractive reserve;

c) Preserve the native forest;

d) Ensure the sustainable use of natural resources;

e) Promote access to education and health care for beneficiaries.

Despite them being defined as "specific", they could have been recorded as "general", since they refer to the CU as a whole.

3.2 **General objective** concerning the general program "Environmental and Socioeconomic Sustainability Programs of the Unit (PSAS)"

Section 4 (four) of the ROP EXRES management plan is entitled: "Contents of the Management Plan: Management Unit" and is made up of eight (8) sub-sections, namely:

4 Contents Management plan: Unit Management

4.1 Unit management structure;

4.2 Necessary infrastructure;

4.3 Management agreement;

4.4 EXRES zoning;

4.5 Proposal for a buffer zone;

4.6 Scenarios;

4.7 Environmental and socioeconomic sustainability programs;

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4.8 Strategic Planning.

The 2014 Management Plan indicates that ROP EXRES has a "general program" (item 4.7 above) consisting of five programs subdivided into 21 sub-programs designed to meet the needs of the community and the reserve. The overall program, its 5 programs, and 21 subprograms originated due to demand and the EXRES's potential, which were detected during the construction process of the Management Plan itself.

Subsection 4.7 of Section 4 of the Management Plan, p. 123 contains the general program called PSAS with the following objective: "It aims to promote environmental conservation, sustainable management of natural resources, value culture and improve the quality of life of traditional populations" (BRAZIL, 2014).

3.3 **"Common" objectives** referring to the programs contained in the aforementioned general program

According to the Management Plan, the general program entitled PSAS is divided into five (5) programs:

a) Quality of Life and Citizenship Program;
b) Natural Resources and Supply Chains Management Program;
c) Degraded Areas Recovery Program;
d) Environmental Monitoring and Protection Program;
e) Management and Administration Program.

Each of the five (5) programs has its own objectives, except for the "Management and Administration Program", for which no objective is recorded in the 2014 ROP EXRES management plan document. The objectives are:

a) Quality of Life and Citizenship Program
objective: To value culture and improve the quality of life of traditional Exres populations.
b) Natural Resources and Productive Chains Management Program
objective: To promote environmental conservation and sustainable management of natural resources in the Rio Ouro Preto Exres.
c) Degraded Area Recovery Program
objective: To promote the recovery of degraded areas with native species, preferably those of commercial interest.
d) Environmental Monitoring and Protection Program
objective: To promote the protection of the Exres against invaders and curb environmental crimes.
e) Management and Administration Program
objective: NOTHING CONTAINED!

3.4 **"Common" objectives** referring to the subprograms contained in the programs that make up the overall program:

Each of the five (5) programs that belong to the general program called PSAS have subprograms which were dismembered in order to better meet the specifics of ROP EXRES. The five (5) programs are divided into the following subprograms:

a) Quality of Life and Citizenship Program - divided into nine (9) sub-programs:
a.1 Health Subprogram;
a.2 Education Subprogram;
a.3 Housing/living arrangements Subprogram;
a.4 Sanitation Subprogram;
a.5 Communication Subprogram;
a.6 Culture Subprogram;
a.7 Leisure and Sport Subprogram;
a.8 Energy Subprogram;
a.9 Transportation and Access Subprogram
b) Natural Resources and Supply Chains Management Program - divided into ten (10) subprograms:
b.1 Rubber Subprogram;
b.2 Brazil Nut Subprogram;
b.3 "Other Extractive Products" Subprogram;
b.4 Wildlife Management Subprogram;
b.5 Fisheries Resource Subprogram s;
b.6 Food Safety Subprogram - Agriculture;
b.7 Food Safety Subprogram - Animal Husbandry;
b.8 Timber Products Subprogram;
b.9 Tourism Subprogram;
b.10 Research Subprogram.
c) Degraded Area Recovery Program - does not have any subprograms.
d) Environmental Monitoring and Protection Program - does not have any subprograms.
e) Management and Administration program - divided into two (2) subprograms:
e.1 Infrastructure and Personnel Subprogram;
e.2 Land Tenure Subprogram.

Altogether there are 21 subprograms, each with its own purpose, which are detailed below:

a) Quality of Life and Citizenship Program - divided into nine (9) subprograms:
a.1 Health Subprogram
objective: To guarantee the basic right to health care for residents of the Exres.
a.2 Education Subprogram
objective: To ensure the right to education for residents of the Exres.
a.3 Housing/living arrangements Subprogram
objective: To improve the quality of housing for beneficiaries of the Exres.
a.4 Sanitation Subprogram

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objective: To improve the quality of life of residents of the Exres through disease prevention.

a.5 Communication Subprogram

objective: To improve communication between communities and municipal headquarters.

a.6 Culture Subprogram

objective: To promote recovery of the culture and identity of the Exres population.

a.7 Leisure and Sport Subprogram

objective: To encourage the practice of soccer and championships in the Exres.

a.8 Energy Subprogram

objective: To provide electricity to all residents of the Exres.

a.9 Transportation and Access Subprogram

objective: To ensure good access and provide regular transportation to all Exres communities.

b) Natural Resources and Supply Chains Management Program - divided into ten (10) subprograms:

b.1 Rubber Subprogram

objective: To add value to and improve the quality of rubber tappers' products and income.

b.2 Brazil Nut Subprogram

objective: To add value to and improve the quality of the nut product.

b.3 "Other Extractive Products" Subprogram

Objective: To improve the income of Exres beneficiaries through the commercialization of sustainable extractive products.

b.4 Wildlife Management Subprogram

objective: To sustainably and adequately manage species of wildlife in the Exres that are causing damage to communities.

b.5 Fishery Resources Subprogram

objective: To assess and enable breeding of native fish in the Exres for consumption and marketing.

b.6 Food Safety Subprogram - Agriculture

objective: To improve agricultural practices, increasing sustainability, productivity and adding value to the products of extractive reserves.

b.7 Food Safety Subprogram - Animal Husbandry

objective: To improve nutrition and income of beneficiaries of the Exres.

b.8 Timber Products Subprogram

objective: To improve the income of extractivists through sustainable management of timber.

b.9 Tourism Subprogram

objective: To involve stakeholders from Guajará Mirim in a sustainable ecotourism experience that strengthens the culture of forest peoples through the principles of solidarity, cooperation and care for the earth.

b.10 Research Subprogram

objective: To promote the development of research within the CU, in diverse areas of study.

c) Degraded Area Recovery Program - does not have any subprograms.

d) Environmental Monitoring and Protection Program - does not have any subprograms.

e) Management and Administration program - divided into two (2) subprograms:

e.1 Infrastructure and Personnel Subprogram

objective: To provide the Exres with adequate infrastructure and staff, as well as forming strategic partnerships to promote sound management of the CU, in order to enable the other subprograms.

e.2 Land Tenure Subprogram

objective: To consolidate the land tenure of the Exres for full implementation of the management plan.

3.5 **"Common" objectives** for the "Management Agreement"

In the ROP EXRES management plan, the CU's "Plan of Use" is called the "Management Agreement". It was designed and updated in three distinct stages: a) in general assembly, with community participation through workshops on August 29 & 30, 2010; b) in 2011 it was revised and c) in 2012 it was revised, approved by ICMBio and published in the Official Journal of the Union on 02/21/13 (BRAZIL, 2014).

The ROP EXRES "Management Agreement" has only six (6) pages, consisting of nine (9) sections and 46 (forty-six) paragraphs. It has two (2) distinct objectives:

a) To ensure the self-sustainability of the EXRES by regulating the use of resources and behaviors to be followed by residents;

b) To express to ICMBio the commitment of EXRES residents to comply with environmental legislation and at the same time offer a verification tool of compliance that is accepted by all.

3.6 **Strategic objectives** related to the subprograms ("d" above).

Finally, the remaining objectives identified in the 2014 ROP EXRES Management Plan are so-called "strategic objectives". Similar to the "Management Agreement", it states that the stakeholders involved with the CU decided to also include "Strategic Planning" in the 2014 ROP EXRES Management Plan. Strategic objectives resulted from strategic planning.

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The strategic objectives are the result of two (2) distinct segments, both of which are linked to the management plan building process, namely:

a) they are the result of the objectives of the subprograms that make up the general program called PSAS;

b) they are the result of the "Balanced Scorecard" method.

> Construction of the strategic objectives began with community participants prioritizing the objectives of environmental and socio-economic sustainability subprograms at a workshop. [...] The most prioritized subprograms' objectives were transformed into strategic objectives. (BRAZIL, 2014, p. 137, 138)
>
> Other strategic objectives were inserted during a discussion at the April/2013 workshop, seeking to contemplate the mission and vision of the future of the Exres. All were then arranged in the form of a map [...] using a methodology adapted from the "Balanced Scorecard" method - BSC. (BRAZIL, 2014, p. 138)

It is clear that the management plan's strategic objectives are derived from various processes and not a single activity.

Regarding these two (2) different time points, from which the strategic objectives originated during the management plan's construction process, it is important to note the following:

3.6.1 **Strategic objectives** as a result of the objectives of the subprograms that make up the general program called PSAS

During the "Participatory Planning Workshop" in order to generate the strategic objectives of ROP EXRES, the objectives of the 21 PSAS subprograms were presented to the entire community present. At the time, it was requested that of the 21 presented subprograms, each participant elect five (5) they considered to be of greatest importance and priority. As a result of the activity, a table was created containing the subprograms in descending order of priority according to the vote of the local community. The result was as follows:

Table 1 – Priority ranking of ROP EXRES according to election by residents in April/2013.

Order of priority	Elected themes in Descending Order of Priority	Score Obtained According to Votes Obtained
1st	Electricity	33
2nd	Rubber	25
3rd	Communication systems	24
4th	Transportation	22
5th	Sustainable forest management plan	18
6th	Payment for environmental services	17
7th	Farming practices	16
8th	Health	15
9th	Education	14
10th	Basic sanitation	13
11th	Training courses	11
12th	Brazil Nuts	09
13th	Small livestock	08
14th	Fish farming	08
15th	Other extractive products	07
16th	Tourism	07
17th	Housing	07
18th	Cultural revival	05
19th	Recovery of degraded areas	02
20th	Protection and monitoring	02
21th	Wildlife management	01
22th	Exres management	0

Preparation: Franciele Bazan.

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In choosing the priorities of the CU, the community excluded four (4) items from the subprograms and added five (5) new ones in their place. Specifically:

Table 2 – Exclusion of subprograms and inclusion of new elected priority themes for ROPR EXRES during the election of the five (5) considered most relevant.

Subprograms	Excluded	New Theme Included
Quality of Life and Citizenship Program		
1 Health Subprogram	-	-
2 Education Subprogram	-	-
3 Housing/living spaces Subprogram	-	-
4 Sanitation Subprogram	-	-
5 Communication Subprogram	-	-
6 Culture Subprogram	-	-
7 Leisure and Sport Subprogram	Yes	-
8 Energy Subprogram	-	-
9 Transportation and Access Subprogram	-	-
Natural Resources and Productive Chains Management Program		
10 Rubber Subprogram	-	-
11 Brazil Nut Subprogram	-	-
12 "Other Extractive Product" Subprogram	-	-
13 Wildlife Management Subprogram	-	-
14 Fishery Resource Subprogram	-	-
15 Food Safety Subprogram - Agriculture	-	-
16 Food Safety Subprogram - Animal Husbandry	-	-
17 Timber Products Subprogram	-	-
18 Tourism Subprogram	-	-
19 Research Subprogram	Yes	-
Management and Administration Program		
20 Infrastructure and personnel Subprogram	Yes	-
21 Land Tenure Subprogram	Yes	-
	-	Payment for environmental services
	-	Training courses
	-	Recovery of degraded areas
	-	Protection and monitoring
	-	Exres management

Preparation: Luciana Fabiano.

In order to elect the five (5) most relevant priorities for the CU, the community opted to maintain 17 (seventeen) issues related to the PSAS subprograms. The following table shows the presented subprograms and the corresponding issues that remained according to the choice of the local community:

Table 3 - Subprograms presented to the community: relationship of equivalence between them and priorities for ROP EXRES as elected by residents.

Subprograms	Excluded topic	Elected themes (Equivalents)
Quality of Life and Citizenship Program		
1 Health Subprogram	-	Health
2 Education Subprogram	-	Education
3 Housing/living spaces Subprogram	-	Housing
4 Sanitation Subprogram	-	Basic sanitation
5 Communication Subprogram	-	Communication systems
6 Culture Subprogram	-	Cultural revival

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7 Leisure and Sport Subprogram	Yes	
8 Energy Subprogram	-	Electricity
9 Transportation and Access Subprogram	-	Transportation
Natural Resources and Productive Chains Management Program		
10 Rubber Subprogram	-	Rubber
11 Brazil Nut Subprogram	-	Brazil Nuts
12 "Other Extractive Products" Subprogram	-	Other extractive products
13 Wildlife Management Subprogram	-	Wildlife management
14 Fishery Resources Subprogram	-	Fish farming
15 Food Safety Subprogram - Agriculture	-	Farming practices
16 Food Safety Subprogram - Animal Husbandry	-	Small livestock
17 Timber Products Subprogram	-	Sustainable forest management plan
18 Tourism Subprogram	-	Tourism
19 Research Subprogram	Yes	
Management and Administration Program		
20 Infrastructure and personnel Subprogram	Yes	
21 Land TenureSubprogram	Yes	
		New Themes included
		1 Payment for environmental services
		2 Training courses
		3 Recovery of degraded areas
		4 Protection and monitoring
		5 Exres Management

Preparation: Luciana Fabiano.

The table below shows, in descending order, the priorities of ROP EXRES as defined by its residents:

Table 4 - Priorities of ROP EXRES in descending order as defined by its residents and the equivalent PSAS subprograms

Elected themes in Descending Order Of Priority	**New Theme Included**	**Subprograms (equivalent)**
1st Electricity	-	8 Energy Subprogram
2nd Rubber	-	10 Rubber Subprogram
3rd Communication Systems	-	5 Communication Subprogram
4th Transportation	-	9 Transportation and Access Subprogram
5th Plan for sustainable forest management	-	17 Timber Products Subprogram
6th Payment for environmental services	Yes	
7th Agricultural practices	-	15 Food Safety Subprogram - Agriculture
8th Health	-	1 Health Subprogram
9th Education	-	2 Education Subprogram
10th Sanitation	-	4 Sanitation Subprogram
11th Training Courses	Yes	
12th Brazil Nuts	-	11 Brazil Nut Subprogram
13th Breeding of small livestock	-	16 Food Safety Subprogram - Animal Husbandry
14th Fish farming	-	14 Fishery Resources Subprogram
15th Other extractive products	-	12 "Other Extractive Products" Subprogram
16th Tourism	-	18 Tourism Subprogram
17th Housing	-	3 Housing/living spaces Subprogram
18th Cultural Revival	-	6 Culture Subprogram

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19th Restoration of degraded areas	Yes	
20th Protection and monitoring	Yes	
21st Wildlife management	-	13 Wildlife Management Subprogram
22nd Exres management	Yes	

Preparation: Luciana Fabiano.

3.6.2 Strategic objectives as a result of the "Balanced Scorecard" method

Strategic objectives are derived using the "Balanced Scorecard" method (BSC). BSC produces performance indicators based on five (5) references, namely: a) environment/society; b) beneficiaries; c) internal processes; d) learning and e) resources.

The ROP EXRES Management Plan (2014) indicates that the strategic objectives produced from the BSC method were arranged on a map, keeping in mind that the validity of these amounts to five (5) years starting from 2014. The Management Plan records the fact that both the map and the strategic objectives can undergo changes and updates without the need to do the same with the Management Plan. The map and the modified strategic objectives can even remain part of the Management Plan.

In order to obtain the strategic objectives, five (5) BSC benchmarks with fundamental questions based on Cabral (2012) came together at the April/2013 workshop. The questions, in turn, were associated with keywords:

Table 5 - BSC methodology adapted and applied to the "Participatory Planning Workshop" in April / 2013 for the strategic objectives of ROP EXRES

Referential BSC Method	**Questions - Cabral (2012)**	**Keywords**
Environment /Society	To fulfill the mission and achieve the vision of the future, what results should be achieved in relation to the conservation of the environment and society? How should we care for the environment and society?	IMPACT
Beneficiaries	To achieve the vision of the future and care for the environment and society, how should we care for users?	RESULT IN/ PRODUCE
Internal processes	To relate to our users and care for the environment and society, which internal processes do we need to be good?	DO
Learning	To be good in the processes considered critical for strategy, what training and learning should our team seek out? What technologies do we need to access? How and in which fields do we need to innovate?	BE
Resources	What are the financial and human challenges to fulfill the identified objectives and to achieve the vision of the future? How can we access and take care of the resources necessary to enable CU strategy?	HAVE

Source: Adapted from the 2014 ROP EXRES Management plan, p. 139.

In the end, adaptation of the BSC method to Cabral's questions (2012) originated in all twenty (20) strategic objectives achieved with community participation, presented in the table below:

Table 6 - Strategic objectives achieved through the BSC method - Balanced ScoreCard

Keyword	**Strategic objectives**
Impact	1 To be recognized for their environmental services
	2 Constitute a barrier to deforestation in Rondônia
	3 Allow for the continuity of man in the forest
Produce	4 To enable access to electricity
	5 Improve beneficiary income
	6 Improve communication between communities and the city
	7 Ensure access to education

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	8 Ensure access to health care
	9 Ensure adequate transportation
Do	10 To settle the land situation
	11 Facilitate the PMFS
	12 Lobby with the government and other organizations
	13 Promote improvement of the rubber and Brazil nut productive chains
	14 Establish partnerships to improve agricultural practices
	15 Implement a community-based tourism plan
Be	16 To develop the technical and managerial competence of the staff with a focus on conflict management, GIS, land tenure, traditional populations, protected area management, and public policies for the target population.
	17 Promote training for beneficiaries in the following areas: administrative organization, forest management, farming techniques, Brazil nuts and rubber.
Have	18 To expand the number of collaborators and employees
	19 Access financial resources from the central administration and capture alternative sources (ICMBio)
	20 Obtain administrative and financial self-sustainability (associations)

Source: Adapted from the 2014 ROP EXRES Management plan, p. 140.

Upon comparison of the strategic objectives obtained from the BSC method with the strategic objectives coming from the subprograms of the larger PSAS program, one can observe new exclusions of previous goals as well as new additions of other objectives that had not been previously mentioned.

The following table shows the exclusions, inclusions and equivalencies between their strategic goals: those from the subprograms of the PSAS program and those from the BSC method:

Table 7 - Final result of the strategic objectives - PSAS and BSC subprograms

Subprograms	**BSC Goals - Equivalent to - Strategic Objectives**	
Quality of Life and Citizenship Program		
1 Health Subprogram	Ensure access to health care	1
2 Education Subprogram	Ensure access to education	2
3 Housing/living spaces Subprogram # Excluded in the application of the BSC method	-	
4 Sanitation Subprogram # Excluded in the application of the BSC method	-	
5 Communication Subprogram	Improve communication between communities and the city	3
6 Culture Subprogram # Excluded in the application of the BSC method	-	
7 Leisure and Sport Subprogram * Excluded in the election of five priorities # Excluded in the application of the BSC method	-	
8 Energy Subprogram	Provide access to electricity	4
9 Transportation and Access Subprogram	Ensure adequate transportation	5
Natural Resources and Productive Chains Management Program		
10 Rubber Subprogram	Promote improvements in the rubber production chain	6
11 Brazil Nut Subprogram	Promote improvements in the Brazil nut production chain	7

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12 " Other Extractive Products" Subprogram	Improve beneficiary income	8
13 Wildlife Management Subprogram # Excluded in the application of the BSC method	-	
14 Fishery Resources Subprogram # Excluded in the application of the BSC method	-	
15 Food Safety Subprogram - Agriculture	Establish partnerships for the improvement of agricultural practices	9
16 Food Safety Subprogram - Animal Husbandry # Excluded in the application of the BSC method	-	
17 Timber Products Subprogram # Excluded in the application of the BSC method	-	
18 Tourism Subprogram	Implement a community-based tourism plan	10
19 Research Subprogram * Excluded in the election of five priorities # Excluded in the application of the BSC method	-	
Management and Administration Program		
20 Infrastructure and personnel Subprogram * Excluded in the election of five priorities	- Develop the technical and managerial competence of staff, focusing on ... - Expand the number of collaborators and employees.	11
21 Land Tenure Subprogram * Excluded in the election of five priorities	Regulate the land situation	12
New Themes Included as Priorities From the Subprograms		
Payment for environmental services	Be recognized for their environmental services	13
Training courses	Promote training for beneficiaries in the areas...	14
Recovery of Degraded Areas	Enable the PMFS[1]	15
Protection and monitoring	Become a barrier to deforestation	16
Exres management	Obtain administrative and financial self-sustainability (associations)	17
	New Objectives Included from the BSC Method	
	Ensure the continuity of man in the forest	18
	Lobby with the government and other organizations	19
	Access financial resources from the central administration and from alternative sources (ICMBio)	20

Preparation: Luciana Fabiano.

[1] Plan for Sustainable Forest Management.

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This chapter introduced the types of objectives found in the 2014 ROP EXRES Management plan. Data analysis will be presented below. The next chapter deals with the analysis of the objectives found in the 2014 ROP EXRES Management plan according to the problem that guided the theoretical framework of this study: What does the ROP EXRES "Management Plan - 2014" indicate regarding the objectives of this CU, according to the 8 indicators of "Module 6 - Objectives" from the RAPPAM method?

In order to present the analysis of the objectives found, the procedure adopted consists of: whether every question in - Module 6 - "Objectives" of the RAPPAM method (there are six (6) questions in all), shows the presence or absence of an indicator (related to the question) in each of the six (6) types of objectives in the management plan, followed by characterization of each objective.

IV. ANALYSIS OF QUESTIONS FROM "MODULE 6 - OBJECTIVES" OF THE RAAPAM METHOD

In order for protected areas to achieve the main objective for which they were created, it is necessary to have a clear understanding of all the objectives that underlie the process in which they operate. The quality of the environment and nature contained within them are not an asset meant to benefit each PA alone; rather, their benefits extend to all areas, to all people. Just to illustrate a few examples:

In a social sense, PAs are important because it is a way to attract the attention of national and international institutions that are involved with preservation, inducing people all over the world, not only the residents of the Exres, to more fully participate in decisions involving PAs across the planet. In this sense the internal and external community to CUs, feel like they are participating in the process and this allows the entire involved community greater assimilation of values of preservation and protection of nature.

In an environmental sense, profound knowledge of the objectives of a CU can be used as an administrative tool to contribute to the technical work of professionals who can improve and enhance the management of an extractive reserve and any other area of preservation and conservation. The whole of society and those involved directly realize how administrators who are knowledgeable of the objectives directly influence environmental preservation.

In the field of health, prior and clear knowledge of a CU's objectives promotes the welfare of society as a whole, since living in a balanced and pollution-free environment is a right that engages and draws the world's attention since everything is connected and our actions against the Amazon can directly affect neighboring countries.

In the field of education, it is possible through the data obtained herein, to establish plan of action to assist educators to include relevant environmental activities which can influence and train future efficient managers.

In the field of politics, it strengthens associations and leaders of other reserves around the world, as a way to achieve greater benefits or incentives, since community leaders involved with local politics have greater knowledge of the features, characteristics and needs of a CU.

In the field of economics, it is essential that associations linked directly to Exres and PAs generally have profound knowledge of their objectives, in such a way that they can make a structured base and prevail in domestic and foreign markets through the marketing of its natural products, where permitted by law.

For the above reasons, a thorough analysis of the objectives found in the 2014 ROP EXRES management plan was carried out.

4.1 QUESTION "A" FROM "MODULE 6 - OBJECTIVES" OF THE RAPPAM METHOD: DO THE CU'S OBJECTIVES INCLUDE PROTECTION AND CONSERVATION OF BIODIVERSITY?

The indicators that are present in question "A" of "Module 6 - Objectives" of the RAPPAM method are: "protection and "conservation". The criteria used to identify the presence of these indicators in the objectives of the 2014 ROP EXRES Management Plan was the concept adopted by Costa (2007) for the term "conservation". According to the author the concept of "conservation" is associated with understanding the sustainable use of natural resources. Hence it follows, that "protect" can be defined as the integral maintenance of natural resources, of which is not foreseen any kind of use, even in a sustainable manner. The indicators presented are included in the following types of objectives of the 2014 ROP EXRES management plan:

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Table 8 - Indicators "protection" and "conservation" present in the "six (6) TYPES OF OBJECTIVES" in the 2014 ROP EXRES management plan.

TYPES OF OBJECTIVES that currently exist in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) **Type 1 - Specific objectives** related to the CU ROP EXRES;	1) PROTECTION 2) CONSERVATION
b) **Type 2 - General objective** concerning the general program "Environmental and Socioeconomic Sustainability Programs" (PSAS) of the Unit;	2) CONSERVATION
c) **Type 3 - "Common" objectives** referring to the programs contained in the aforementioned general program;	1) PROTECTION 2) CONSERVATION
d) **Type 4 - "Common" objectives** referring to the subprograms contained in the programs that make up the PSAS;	1) PROTECTION 2) CONSERVATION
e) **Type 5 - "Common" objectives** for the "Management Agreement";	1) PROTECTION 2) CONSERVATION
f) **Type 6 - Strategic objectives** related to the subprograms ("d" above).	1) PROTECTION 2) CONSERVATION

Preparation: Luciana Fabiano

Table 9 – The indicators "protection" and "conservation" present in "TYPE 1 - SPECIFIC OBJECTIVES" of the 2014 ROP EXRES management plan.

TYPE 1 - SPECIFIC OBJECTIVES from the Management Plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) Ensure a free work area for the extractivists with not bosses	-
b) Avoid invasions in the Exres area	1) PROTECTION
c) Preserve the native forest	1) PROTECTION 2) CONSERVATION
d) Ensure the sustainable use of natural resources	1) PROTECTION 2) CONSERVATION
e) Promote access to education and health care for beneficiaries	-

Preparation: Luciana Fabiano

Table 10 - Indicators "protection" and "conservation" present in "TYPE 2 - GENERAL OBJECTIVE OF PSAS" of the 2014 ROP EXRES management plan.

TYPE 2 - GENERAL OBJECTIVE OF PSAS in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
Promote environmental conservation, sustainable management of natural resources, value culture and improve the quality of life of traditional populations	2) CONSERVATION

Preparation: Luciana Fabiano

Table 11 - Indicators "protection" and "conservation" present in "TYPE 3 - OBJECTIVES OF 5 PSAS PROGRAMS" of the 2014 ROP EXRES management plan.

TYPE 3 - OBJECTIVES OF 5 PSAS PROGRAMS in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) Quality of Life and Citizenship Program *objective*: To value culture and improve the quality of life of the traditional Exres	-

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population.	
b) Natural Resources and Productive Chains Management Program *objective*: To promote environmental conservation and sustainable management of natural resources in the Rio Ouro Preto Exres.	2) CONSERVATION
c) Degraded Area Recovery Program *objective*: To promote the recovery of degraded areas with native species, preferably those of commercial interest.	2) CONSERVATION
d) Monitoring and Environmental Protection Program *objective*: To promote protection of the Exres against invaders and curb environmental crimes.	1) PROTECTION
e) Management and Administration Program *objective*: NOTHING CONTAINED!	-

Preparation: Luciana Fabiano

Table 12 - Indicators "protection" and "conservation" present in "TYPE 4 - OBJECTIVES OF THE SUBPROGRAMS" from the 2014 ROP EXRES management plan.

Subprograms	**TYPE 4 - OBJECTIVES OF THE SUBPROGRAMS**	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) Quality of Life and Citizenship Program - divided into nine (9) subprograms:		
a.1 Health Subprogram	Ensure the basic right to health care for residents of the Exres.	-
a.2 Education Subprogram	Ensure the right to education for residents of the Exres.	-
a.3 Housing/living space Subprogram	Improve the quality of housing of the beneficiaries of the Exres.	-
a.4 Sanitation Subprogram	Improve the quality of life of residents of the Exres through disease prevention.	-
a.5 Communication Subprogram	Improve communication between communities and municipal headquarters.	-
a.6 Culture Subprogram	Promote recovery of the culture and identity of the Exres population.	-
a.7 Leisure and Sport Subprogram	Encourage the practice of soccer and championships in the Exres.	-
a.8 Energy Subprogram	Provide electricity to all residents of the Exres.	-
a.9 Transportation and Access Subprogram	Ensure good access to and provide regular transportation to all Exres communities	-
b) Natural Resources and Supply Chains Management Program - divided into ten (10) subprograms:		
b.1 Rubber Subprogram	Add value to and improve the quality of the rubber tapper's product and income	-
b.2 Brazil Nut Subprogram	Add value to and improve the quality of the product Brazil nuts.	-
b.3 "Other Extractive Products" Subprogram	Improve the income of the Exres beneficiaries through the commercialization of sustainable extractive products.	-
b.4 Wildlife Management Subprogram	Sustainably and adequately manage species of wildlife in the Exres that are causing damage to communities.	1) PROTECTION 2) CONSERVATION
b.5 Fishery Resources Subprogram	Evaluate and facilitate the breeding of native fish in the Exres for consumption and marketing.	

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b.6 Food Safety Subprogram - Agriculture	Improve agricultural practices, increasing sustainability, productivity and adding value to the products of extractive reserves.	1) PROTECTION 2) CONSERVATION
b.7 Food Safety Subprogram - Animal Husbandry	Improve nutrition and income of the beneficiaries of the Exres.	
b.8 Timber Products Subprogram	Improve the income of extractivists through the sustainable management of timber.	1) PROTECTION 2) CONSERVATION
b.9 Tourism Subprogram	Involve stakeholders from Guajará Mirim in a sustainable ecotourism experience that strengthens the culture of forest peoples through the principles of solidarity, cooperation and care for the earth.	1) PROTECTION 2) CONSERVATION
b.10 Research Subprogram	Promote the development of research within the CU, in various areas of study.	
c) Degraded Area Recovery Program		
It does not have any subprograms.		
d) Monitoring and Environmental Protection Program		
It does not have any subprograms.		
e) Management and Administration Program - divided into two (2) subprograms:		
e.1 Infrastructure and Personnel Subprogram	Provide the Exres with adequate infrastructure and staff, as well as forming strategic partnerships to promote sound management of the CU, in order to enable the other subprograms.	
E.2 Land Tenure Subprogram	Consolidate land tenure of the Exres for full implementation of the management plan.	

Preparation: Luciana Fabiano

Table 13 - Indicators "protection" and "conservation" present in "TYPE 5 - MANAGEMENT AGREEMENT OBJECTIVES" from the 2014 ROP EXRES management plan.

TYPE 5 - MANAGEMENT AGREEMENT OBJECTIVES in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) To ensure self-sustainability of the EXRES by regulating the use of resources and behaviors to be followed by residents;	2) CONSERVATION
b) To express to ICMBio the commitment of EXRES residents to comply with environmental legislation and at the same time offer a verification tool of compliance to norms that is accepted by all.	-

Preparation: Luciana Fabiano

Table 14 - Indicators "protection" and "conservation" present in "TYPE 6 - STRATEGIC OBJECTIVES OF THE BSC METHOD " from the 2014 ROP EXRES management plan.

Keyword	**TYPE 6 - STRATEGIC OBJECTIVES FROM THE BSC METHOD**	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
Impact	1 To be recognized for their environmental services	2) CONSERVATION
	2 Constitute a barrier to deforestation in Rondônia	1) PROTECTION
	3 Allow for the continuity of man in the forest	-
Result in	4 Enable access to electricity	-
	5 Improve the income of Beneficiaries	-

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	6 Improve communication between communities and the city	-
	7 Ensure access to education	-
	8 Ensure access to health care	-
	9 Ensure adequate transportation	-
Do	10 Settle the Land situation	1) PROTECTION
	11 Facilitate the PMFS	1) PROTECTION 2) CONSERVATION
	12 Lobby with the government and other organizations	-
	13 Promote improvement of the rubber and Brazil nut productive chains	-
	14 Establish partnerships to improve agricultural practices	2) CONSERVATION
	15 Implement a community-based tourism plan	-
Be	16 To develop the technical and managerial competence of the staff with a focus on conflict management, GIS, land tenure, traditional populations, protected area management, and public policies for the target population.	1) PROTECTION
	17 Promote training for beneficiaries in the following areas: administrative organization, forest management, farming techniques, Brazil nuts and rubber.	1) PROTECTION 2) CONSERVATION
Have	18 Expand the number of collaborators and employees	-
	19 Access financial resources from the central administration and capture alternative sources (ICMBio)	-
	20 Obtain administrative and financial self-sustainability (associations)	-

Preparation: Luciana Fabiano

Before starting the discussion on what answers were found in the management plan, it is important to know the meaning of each term (indicator) present in the first question of the RAPPAM method: "Do the PA's objectives include the **protection** and **conservation** of biodiversity?

To ensure the maintenance of an ecologically balanced ecosystem, **protection** and **conservation** measures aimed at biodiversity should be adopted so that the services that result from environmental interactions that are essential to humans' well-being will be protected.

The term **protection** is associated with the set of measures taken to minimize the risk of contamination to and deterioration of the environment. According to SNUC (2000) only indirect use of forest resources is permitted, avoiding any modification or interference by human beings that could cause irreversible damage or destruction.

Conservation, on the other hand, is classified as *ex situ* when looking to conserve certain species outside their habitat or *in situ* when seeking to preserve and maintain various species in their natural habitats. Conservation can be defined as the set of standards geared to human well-being, through conscious and rational use of environmental resources in a particular area.

When defining an explored area it is easier to identify the weakest points within a unit, those susceptible to deforestation and environmental degradation; in this sense, environmental conservation is configured as a tool used to contain or at least minimize negative environmental impacts. It includes protecting and maintaining the renewal of forest areas and the survival of its species for present and future generations.

> In summary, one can say that for environmental sciences, conservation is related to the use and management of areas in a sustainable way (COSTA, 2007, p. 3).

Overall, while the term "protection" is related to the integrity of nature in its entirety, conservation is linked to man's ability to manage natural resources in a conscious way. But together they are the means which man uses in order to create and develop instruments to contain major environmental problems. For example:

a) Loss and alteration of habitats and biodiversity;
b) Predatory exploitation of resources;
c) Introduction of foreign species into ecosystems;
d) Increase of pathogens;
e) Increase of environmental toxicants; and
f) Climate change (ALHO, 2012, p. 153).

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A management plan should take into consideration, in its studies, the diversity of environments and ecosystems, protection of the CU along with its conservation, environmental impacts and other socio-environmental aspects, according to instructions set forth by IN-ICMBIO 01/2007. It has already been mentioned herein that the ROP EXRES management plan was prepared according to IN-ICMBIO 01/2007; IBAMA's Methodological Roadmap for the Development of Sustainable Federal Extractive Reserve Management Plans, published in 2006, was also used in its elaboration.

We will now look at the features found regarding the indicators "protection" and "conservation" within six (6) types of objectives present in the ROP EXRES management plan:

TYPE 1 - SPECIFIC OBJECTIVES

Even before the ROP EXRES Management plan was prepared, concern for the "protection" and "conservation" of the CU under study proved to be a concern for its community, since the above indicators are contained in the first objectives written for the Exres.

It turns out that the so-called "Specific Objectives" are the first on record to have been developed during the creation of the CU ROP EXRES. Although they are not included in any document on a date prior to the preparation of the management plan, the community contributed to the remembrance of their existence in a "Participatory Workshop" held in April/2013 as recorded in the management plan itself:

> The decree creating the Rio Ouro Preto Exres does not describe the specific objectives of the unit. Therefore, during the participatory workshop in April 2013, a discussion began, especially amongst the older leaders, seeking to highlight the importance of the Exres and remember the reasons that subsidized its creation and its objectives. (BRAZIL, 2014, p. 137)

Among the five (5) "Specific Objectives", 3 (three) of them include the indicators "protection" and "conservation", namely:

Table 15 - Indicators "protection" and "conservation" present in "TYPE 1 - SPECIFIC OBJECTIVES" of the 2014 ROP EXRES management plan.

TYPE 1 - SPECIFIC OBJECTIVES of the Management Plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) Ensure free work area for extractivists with no bosses	-
b) Avoid invasions in the Exres area	1) PROTECTION
c) Preserve the native forest	1) PROTECTION 2) CONSERVATION
d) Ensure the sustainable use of natural resources	1) PROTECTION 2) CONSERVATION
e) Promote access to education and health care for beneficiaries	-

Preparation: Luciana Fabiano.

From the point of view of the reality of the ROP EXRES community as well as considering the context in which the CU in study is inserted, it's easy to see the importance of including the indicators "protection" and "conservation" in each of the objectives:

TYPE 1 b) Avoid invasions in the Exres area - PROTECTION

In ROP EXRES, invasions have been detected at several points, especially by hunters and prospectors.

Invasions are harmful to the "health" of the forest, because it is one of the reasons for the increase in deforestation and extinction of some species of flora and fauna.

> The Amazon rainforest has been the target of frequent attacks without any solid and real action to put an end to these frequent inhumane actions. These actions include uncontrollable, ambitious and aggressive behaviors that ultimately lead to invading armies usurping natural resources. In fact, men themselves act as predators by ravaging huge natural areas which, desolate of any resilience, become deserts where nature is harmed. (BUARQUE, 2013, p. 1).

Avoiding invasions means protecting forest resources and ensuring the livelihood of communities, reducing the pressure on some animals and plants consumed by residents.

TYPE 1 c) Preserve the native forest - PROTECTION AND CONSERVATION

Native or natural forest vegetation corresponds to those that originate within the protected area, and has not undergone any change caused by human interference. ROP EXRES consists of various types of vegetation, housing a large biological diversity. Thus, it's important to protect it and conserve its resources.

> The country has the largest area of primary rainforest in the world, one-fifth of the fresh water contained in this forest, and around a third of the planet's biodiversity. (BRASÍLIA, 2017, p. 8)

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According to Guimarães (2018), preserving the native forest is important because when an area is cleared, the vegetation that make up that ecosystem changes dramatically, not only affecting the flora and fauna in the area, but also affecting 85% (eighty-five) of life around the deforested area; this is the so-called border effect.

> With the preservation of at least 40% of the original vegetation, the forest is rich in large trees with fruits whose seeds are dispersed by birds and mammals such as tapirs, toucans and agoutis. In the shaded area, amphibians and reptiles avoid excessive heat (GUIMARÃES, 2018, p. 4).

TYPE 1 d) Ensure the sustainable use of natural resources - PROTECTION AND CONSERVATION

To ensure or guarantee is no easy task, but there are many modalities and instruments with which one can achieve the objective proposed herein. Examples of these tools include sound legal frameworks, laws, decrees, resolutions, and legislation in general. Another way for this to be achieved is to empower people in the practice of sustainability; this term, although widely publicized, in practice the majority of the population, when asked to describe its meaning, is ignorant on the subject. This objective can be obtained through surveillance, registration and controlling technological tools, such as drones, accurate georeferencing devices, software calculations and projections about possible natural disasters or those caused by human interference, etc. Either way, the important thing is that the specific objectives of the CU ensure this as a primary premise.

Ensuring sustainable use implies "protection" and implies "conservation" by those who "make use", that is, the CU's own internal community and society outside the CU. Sustainable use enables protection of natural resources and also makes it possible to conserve these resources.

TYPE 2 - GENERAL PSAS OBJECTIVE

In turn, in summarizing the main objective of the PSAS, is to encompass the objectives of each of its 21 subprograms, combining the indicator "conservation" with the word "sustainable" to form the ideal partnership between the idea of maintaining the quality of nature as well as maintaining the quality of life of man himself.

Table 16 - Indicators "protection" and "conservation" Present In "TYPE 2 - GENERAL OBJECTIVE OF PSAS" in the 2014 ROP EXRES Management Plan.

TYPE 2 - GENERAL OBJECTIVE OF THE PSAS in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
Promote environmental conservation, sustainable management of natural resources, value culture and improve the quality of life of traditional populations	2) CONSERVATION

Preparation: Luciana Fabiano.

The verb "promote" indicates the need to introduce more "conservation" practices in the environment as a whole, some of which are still not included in the daily life of the community, arising from the evolution of the concept of sustainability linked to the discovery of the finiteness of natural resources, rather than the idea of infinite resources. It also indicates promoting conservation in the sense of a continuous, i.e. constant, process.

TYPE 3 - OBJECTIVES OF THE 5 PSAS PROGRAMS

IBAMA's development plan sets out a number of programs and subprograms meant to promote social, economic and environmental development of the extractive reserve; it is at the discretion of each reserve to add, delete, or unite them according to their needs. Based on this, ROP EXRES defined each program and subprogram as shown below:

Table 17 - Programs and subprograms of ROPEXRES based on IBAMA's records

PROGRAMS	**SUBPROGRAMS**
Quality of Life and Citizenship Program	Health, Education, Housing/living arrangements, sanitation, communication, Culture, Leisure and Sport, Energy, Transportation and Access
Natural Resources and Productive Chains Management Program	Rubber, Brazil nuts, "Other Extractive products," Wildlife Management, Fisheries Resources, Food Security (Agriculture and

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	Animal Husbandry), Timber Products, Tourism and Research
Degraded Areas Recovery Program	Nothing contained
Environmental Monitoring and Protection Program	Nothing contained
Management and Administration Program	Infrastructure and personnel, Land Tenure

Source: Adapted from the 2014 ROP EXRES management plan.

Of the five (5) "Program Objectives" that make up this type of ROP EXRES objective, three (3) include the indicators "protection" and "conservation":

Table 18 - Indicators "protection" and "conservation" present in "TYPE 3 - OBJECTIVES OF THE 5 PSAS PROGRAMS" of the 2014 ROP EXRES management plan.

TYPE 3 - OBJECTIVES OF THE 5 PSAS PROGRAMS in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) Quality of Life and Citizenship Program *objective*: To value culture and improve the quality of life of traditional Exres populations.	-
b) Natural Resources and Productive Chains Management Program *objective*: To promote environmental conservation and sustainable management of natural resources in the Rio Ouro Preto Exres.	2) CONSERVATION
c) Degraded Area Recovery Program *objective*: To promote the recovery of degraded areas with native species, preferably those of commercial interest.	2) CONSERVATION
d) Environmental Monitoring and Protection Program *objective*: To promote protection of the Exres against invaders and curb environmental crimes.	1) PROTECTION
e) Management and Administration Program *objective*: NOTHING CONTAINED!	-

Preparation: Luciana Fabiano.

Regarding these objectives relating to the PSAS Programs:

TYPE 3 b) Promote environmental conservation and sustainable management of natural resources in the Rio Ouro Preto Exres- CONSERVATION

This goal is an abbreviation; it appears that it is inserted in the General Objective of PSAS "*Promote environmental conservation, sustainable management of natural resources, value culture and improve the quality of life of the traditional population.*" Here the difference is the indication that in this case conservation and sustainability are specific to ROP.

TYPE 3 c) Promote the recovery of degraded areas with native species from the region, preferably those of commercial interest - CONSERVATION

The 2014 ROP EXRES Management plan contains a list of native fauna and flora. Associating natural species of the reserve with those of globally recognized interest is a strategy in order to ensure the survival of the resident community. The following two passages demonstrate a concern with this situation:

> The main extractive products with marketing purposes used in the EXRES are rubber and Brazil nuts (ICMBio, 2008d, ICMBio, 2008f). In field research in May 2009, other native flora products were recorded as having been extracted for local use, in insignificant amount by some locals, but these are important indications of potential extractive activities of the unit. (BRAZIL, 2014, p. 65)
>
> Reduced earnings from the practice of extraction of rubber and Brazil nuts currently make residents intensify agricultural activities and the breeding of small livestock, in order to obtain a better income. The medium- and long-term expansion of these activities on afforested areas can set a threat to the conservation of natural resources of the EXRES, as previously mentioned. On the other hand, this threat can be tackled by creating alternatives for sustainable income, valuable extractive products and by improving basic services and infrastructure (education, energy, health, transportation, sanitation and communication). (BRAZIL, 2014, p. 101)

TYPE 3 d) Promote protection of the Exres against invaders and curb environmental crimes - PROTECTION

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Several parts of the management plan address the constant, imminent threat of environmental crimes, requiring daily protection of the CU:

> Regarding illegal logging and hunting of wild animals practiced by outsiders, according to testimony from residents. (BRAZIL, 2014, p. 97)
>
> Attention points: illegal fishing invaded areas between the Nossa Senhora dos Seringueiros community and the mouth of the river, the area near the southern border, east side; and also the occurrence of many hunts by indigenous neighbors (Pacaas Novos Indigenous Lands); in the Pompey region down along the right edge of the bedrock, there are still problems including invasions, deforestation, and cattle raising by non-traditional occupants. (BRAZIL, 2014, p. 99)
>
> The entry region for poachers and timber theft is by the tributaries; it is an area of threat for dismemberment and new invasions (exclusion proposal area). (BRAZIL, 2014, p. 99)
>
> The final departure of traditional populations from the area could leave it even more vulnerable to raids and predatory and irregular use of natural resources. (BRAZIL, 2014, p. 100)

TYPE 4 - OBJECTIVES OF THE SUBPROGRAMS

Each subprogram has a specific objective. During preparation of the management plan, a workshop for the community was held in order to choose the most important objectives to be achieved in a period of five (5) years. The result of the workshop is presented in Table 2:

Table 2 – Subprogram themes ranked in descending order of priority.

THEMES OF THE SUBPROGRAMS	POINTS
1st Electricity	33
2nd Rubber	25
3rd Communication Systems	24
4th Transportation	22
5th Plan for Sustainable Forest Management (PMFS)	18
6th Payment for Environmental Services	17
7th Agricultural Practices	16
8th Health	15
9th Education	14
10th Basic Sanitation	13
11th Training Courses	11
12th Brazil Nuts	9
13th Breeding of Small Livestock	8
14th Fish farming	8
15th Other Extractive Products	7
16th Tourism	7
17th Housing	7
18th Cultural Revival	5
19th Degraded Areas Recovery	2
20th Protection and Monitoring	2
21st Wildlife Management	1
22nd Exres Management	0
Total	264

Source: 2014 ROP EXRES Management plan, p. 138.

Table 2 shows the subprograms with points according to the order of preference of the residents; the item considered most relevant was electricity with 33 points. Not surprisingly the 2nd (second) highest scoring subprogram was that referring to rubber, since many of the residents are remnants of the economic rubber boom.

The "Plan for Sustainable Forest Management" appears in 5th (fifth) place in the table; however, the fact that subprograms like Degraded Area Recovery, Protection and Control, Wildlife Management, and EXRES Management appear in the four (4) last positions (only accounting for 5 (five) points), shows the depreciation of environmental protection by extractivists.

After defining the objectives of the subprograms of greatest need, which were later turned into strategic objectives, it was necessary to define the ways in which to achieve them. Therefore, the team responsible for developing the management plan based its work on the strategic planning method, a technique used to organize various ideas of a group to define the best way to move forward in order to achieve a certain goal (JEROZOLIMSK, 2013).

> Thus, planning is thinking before acting. To manage a protected area, it is necessary to evaluate the different possibilities of action and decide which are the best alternatives. Planning allows for better use of time and resources. The objectives of a conservation unit can be achieved more easily when planned methodically (JEROZOLIMSK, 2013, p.14).

Managers need, even with limited resources, to learn how to develop efficient alternatives for the development of the unit, but before making any decision they need to reflect on what results need to be achieved, i.e., think, then act.

According to the chart below, it is evident that the indicators "protection" and "conservation" are only part of the group of subprogram objectives belonging to the program entitled "b) Natural Resources and Productive Chains Management Program - divided into ten (10) subprograms. Even then, of the ten (10) subprograms, only 4 (four) of them include the indicators being herein studied, "protection" and "conservation":

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Table 19 - Indicators "protection" and "conservation" present in "TYPE 4 - OBJECTIVES OF THE SUBPROGRAMS" in the 2014 ROP EXRES management plan.

Subprograms	**TYPE 4 - OBJECTIVES OF THE SUBPROGRAMS**	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) Quality of Life and Citizenship Program - divided into nine (9) subprograms:		
a.1 Health Subprogram	Ensure the basic right to health care for residents of the Exres.	-
a.2 Education Subprogram	Ensure the right to education for residents of the Exres.	-
a.3 Housing/living arrangements Subprogram	Improve the quality of housing for beneficiaries of the Exres.	-
a.4 Sanitation Subprogram	Improve the quality of life for residents of the Exres through disease prevention.	-
a.5 Communication Subprogram	Improve communication between communities and municipal headquarters.	-
a.6 Culture Subprogram	Promote revival of the culture and identity of the Exres population.	-
a.7 Leisure and Sport Subprogram	Encourage the practice of soccer and championships in the Exres.	-
a.8 Energy Subprogram	Provide electricity to all residents of the Exres.	-
a.9 Transportation and Access Subprogram	Ensure good access to and provide regular transportation to all Exres communities	-
b) Natural Resources and Supply Chains Management Program - divided into ten (10) subprograms:		
b.1 Rubber Subprogram	Add value to and improve the quality of rubber tapping products.	-
b.2 Brazil Nut Subprogram	Add value to and improve the quality of the product Brazil nuts.	-
b.3 "Other Extractive Products" Subprogram	Improve the income of Exres beneficiaries through the commercialization of sustainable extractive products.	-
b.4 Wildlife Management Subprogram	Sustainably and adequately manage species of wildlife in the Exres that are causing damage to communities.	1) PROTECTION 2) CONSERVATION
b.5 Fishery Resources Subprogram	Assess and facilitate the breeding of native fish in the Exres for consumption and marketing.	
b.6 Food Safety Subprogram - Agriculture	Improve agricultural practices, increasing sustainability, productivity and adding value to the products of extractive reserves.	1) PROTECTION 2) CONSERVATION
b.7 Food Safety Subprogram - Animal Husbandry	Improve nutrition and income of beneficiaries of the Exres.	
b.8 Timber Products Subprogram	Improve the income of extractivists through sustainable management of timber.	1) PROTECTION 2) CONSERVATION
b.9 Tourism Subprogram	Involve stakeholders from Guajará Mirim in a sustainable ecotourism experience that strengthens the culture of forest peoples through the principles of solidarity, cooperation and care for the earth.	1) PROTECTION 2) CONSERVATION
b.10 Research Subprogram	Promote the development of research within the CU, in various areas of study.	
c) Degraded Area Recovery Program		
It does not have any subprograms.		

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d) Environmental Monitoring and Protection Program		
It does not have any subprograms.		
e) Management and Administration program - divided into two (2) subprograms:		
e.1 Infrastructure and Personnel Subprogram	Provide the Exres with adequate infrastructure and staff, as well as forming strategic partnerships to promote sound management of the CU, in order to enable the other subprograms.	
E.2 Land Tenure Subprogram	Consolidate land tenure of the Exres for full implementation of the management plan.	

Preparation: Luciana Fabiano.

TYPE 4 b.4) Sustainably and adequately managing Exres wildlife species that are causing damage to communities - PROTECTION AND CONSERVATION

Wild animals are animals that live in nature in different types of ecosystems that have not been domesticated by man. They do not have much contact with humans, so when they come into contact with man they become aggressive; they are called non-domesticated. ROP EXRES is rich in wildlife as recorded in its management plan:

> The fauna of the Exres is typical of the Amazon biome, including a wide variety of wild animals. In the lowlands acai and bacaba is found, whose fruits attract macaws, inhambus, trumpeters, guan, curassow, parrots, parakeets and toucans. It is recommended to conduct faunal surveys in the EXRES, at various locations, to specify the existing fauna and especially to check the impact of hunting on wildlife, assessing its sustainability. (BRAZIL, 2014, p. 28).

Since ROP EXRES is an environmental protection unit, it is very common to find these animals near the residences of extractivists, so it is important to know how to handle them, for the safety of the community and especially of the animals. There are several reports on the subject, through the testimony of residents, according to the record of the management plan itself:

> During field research, in May 2009, the residents had cited the slaughter of some wild animals that were preying on the residents' own domestic animals. Among them, several birds of prey (hawks and eagles), some felines (jaguar, wild cat), and more rarely bush dogs and small foxes were cited. The preventive killing of snakes (anaconda- *Eunectes murinus*; boa constrictor) was also mentioned. The killing of a harpy eagle, a species that is vulnerable to extinction, was also mentioned, along with the occurrence of this species in the lower Rio Ouro Preto communities, indicating the urgency of environmental education and access to information on-site. (BRAZIL, 2014, p. 80).

Wildlife management practices are a way to not hurt wild animals, to decrease hunting of endangered species, and also to promote an ecological balance. A publication from the state of Paraná stresses maintaining this balance:

> Animals have important roles in maintaining the balance in nature. They disperse seeds, "planting" trees, control populations of species when in excess which can be harmful to our crops and livestock, and also produce important medications for the cure of many diseases. Every small animal has its specific function in nature and its absence entails incalculable damage to mankind. (PARANA, 2018, p. 1).

TYPE 4 b.6) Improve agricultural practices, increasing sustainability, productivity and adding value to Exres products - PROTECTION AND CONSERVATION

The predominant economic activity in ROP EXRES is agriculture focused on cassava plantations, for the manufacture of cassava flour sold in the local market. Improving agricultural practices can cause a positive jump in income for extractivists; in this sense the following is understood:

> A set of principles, standards and technical recommendations applied to the production, processing and transportation of food, oriented to take care of human health, protect the environment and improve conditions for workers and their families. (FAO, 2007, p. 6).

Sustainable agricultural practices can promote protection when they aim to conserve soil and water, reduce the use of pesticides, increase the quality of the cultured product, and increase the possibility of entering new markets that monitor for sustainability.

TYPE 4 b.8) Improve the income of extractivists through the sustainable management of timber - PROTECTION AND CONSERVATION

It has been cited that the main income for extractivists comes from agriculture, while other sectors with

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economic potential are forgotten, or are not developed due to lack of knowledge and investment by the Exres administration. One way to diversify economic activities would be sustainable management of timber, using several techniques in order to exploit natural resources, aligned with sustainability, through protection of the trees that need not be removed.

ROP EXRES has areas that can be exploited; however, illegal logging is increasingly affecting the prevalence of timber with high economic value in the market. The consequences are contained in the management plan:

> On the dry land flank situated between the lowland and upland, generally flat, sandy, low in humus, in high leaching process, low fertility, there is a scarce volume of "hard" wood (the species which usually have economic value). (BRAZIL, 2014, p. 28).

The sustainable management of timber is a way to reduce deforestation and generate a source of income for the residents of the unit.

TYPE 4 b.9) Involve stakeholders from Guajará Mirim in a sustainable ecotourism experience that strengthens the culture of forest peoples through the principles of solidarity, cooperation and care for the earth - PROTECTION AND CONSERVATION

Since it presents unique biological diversity, the development of ecotourism in ROP EXRES is one of the issues addressed in the management plan. The appreciation of its natural beauty through ecotourism is seen as an alternative to generate income for the community, as opposed to the model that generates profit from agriculture and logging. Santos presents some benefits of ecotourism for these populations:

> Ecotourism is a segment of tourism that uses, in a sustainable manner, natural and cultural heritage, encourages its conservation and seeks the formation of environmental awareness through the interpretation of the environment, promoting the well-being of the population. (SANTOS, 2012, p. 12)

Ecotourism is growing a lot, but although SNUC itself has as its objective to promote eco-tourism, its development encounters many difficulties due to the lack of standards that regulate the implementation of tourism in environmental protection units.

> XII - to foster conditions and promote environmental education and interpretation, recreation in contact with nature and eco-tourism. (BRAZIL, 2000, p. 2).

Ecotourism promotes environmental protection by bringing together leisure and environmental education; through its activities it shows the value of nature and the importance of preserving biodiversity.

> It enables effectiveness and efficiency in economic activity, while maintaining the diversity and stability of the environment, acting as a tool that can guide, bring awareness and balance between the damage caused by economic development and the need to preserve the environment. (KRAEMER, 2005, p. 1)

TYPE 5 - MANAGEMENT AGREEMENT OBJECTIVES

Table 20 - Indicators "protection" and "conservation" present in "TYPE 5 - MANAGEMENT AGREEMENT OBJECTIVES" in the 2014 ROP EXRES management plan.

TYPE 5 - MANAGEMENT AGREEMENT OBJECTIVES in the management plan	**Present Indicators: 1) PROTECTION and 2) CONSERVATION**
a) To ensure the self-sustainability of the Exres by regulating the use of resources and behaviors to be followed by its residents;	2) CONSERVATION
b) To express to ICMBio the commitment of EXRES residents to comply with environmental legislation and at the same time offer a verification tool of compliance of norms that is accepted by all.	-

Preparation: Luciana Fabiano.

By uniting the objectives of subprograms with strategic planning, the strategic objectives of the extractive reserve were defined, based on the methodology adapted from the "Balanced Scorecard". This methodology allows the strategy to be developed based on five (5) keywords: Impact, Result in, Do, Be and Have, encompassing society, extractivists (beneficiaries), administrative processes, learning and resources.

The protection and conservation of biodiversity are inserted in the objectives of the 2014 ROP EXRES management plan through the following strategic objectives:

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TYPE 6 - STRATEGIC OBJECTIVES

Table 21 - Indicators "protection" and "conservation" present in "TYPE 6 - STRATEGIC OBJECTIVES FROM THE BSC METHOD" in the 2014 ROP EXRES management plan.

Keyword	TYPE 6 - STRATEGIC OBJECTIVES FROM THE BSC METHOD	Present Indicators: 1) PROTECTION and 2) CONSERVATION
Impact	1 To be recognized for their environmental services	2) CONSERVATION
	2 Constitute a barrier to deforestation in Rondônia	1) PROTECTION
	3 Allow the continuity of man in the forest	-
Result in	4 Enable access to electricity	-
	5 Improve the income of Beneficiaries	-
	6 Improve communication between communities and the city	-
	7 Ensure access to education	-
	8 Ensure access to health care	-
	9 Ensure adequate transportation	-
Do	10 Settle the Land situation	1) PROTECTION
	11 Facilitate the PMFS	1) PROTECTION 2) CONSERVATION
	12 Lobby with the government and other organizations	-
	13 Promote improvement of the rubber and Brazil nut productive chains	-
	14 Establish partnerships to improve agricultural practices	2) CONSERVATION
	15 Implement a community-based tourism plan	-
Be	16 To develop the technical and managerial competence of the staff with a focus on conflict management, GIS, land tenure, traditional populations, protected area management, and public policies for the target population.	1) PROTECTION
	17 Promote training for beneficiaries in the following areas: administrative organization, forest management, farming techniques, Brazil nuts and rubber.	1) PROTECTION 2) CONSERVATION
Have	18 Expand the number of collaborators and employees	-
	19 Access financial resources from the central administration and capture alternative sources (ICMBio)	-
	20 Obtain administrative and financial self-sustainability (associations)	-

Preparation: Luciana Fabiano.

4.2 QUESTION "B" FROM "MODULE 6 - OBJECTIVES" IN THE RAPPAM METHOD: ARE SPECIFIC GOALS RELATED TO BIODIVERSITY CLEARLY EXPRESSED IN THE MANAGEMENT PLAN?

The indicator of question "B" from "Module 6 - Objectives" of the RAPPAM method is "biodiversity". The RAPPAM method seeks to diagnose whether or not "specific objectives related to biodiversity are clearly stated in the management plan." In order to analyze the 2014 ROP EXRES Management plan the possibility of four (4) existing variables were considered in order to answer that question:

a) variable 01 - consider only "Type 1 - Specific Objectives" from the six (6) types of objectives found in the management plan and identify which of these specific objectives related to biodiversity are clearly expressed (**directly, objectively**) and which of them relate to the biodiversity, but are not clearly expressed (make mention **indirectly**, are **implied**) in the management plan;

b) variable 02 - consider all six (6) types of objectives at once, found in the management plan and identify which ones are specifically related to biodiversity (**directly**, **objectively**), i.e. they are clearly expressed;

c) variable 03 - consider all six (6) types of objectives at once, found in the management plan and identify which ones are specifically related to biodiversity, but are not

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clearly expressed (contained in an **indirect** way, i.e., are **implied**).

Among the possible variables, the last, variable 03 was discarded from the analysis since according to the wording of the question the term "specific" is opposed to the term "implied". If it is specific it cannot be implied. The term "specific" has the connotation of being uniquely and directly related to biodiversity. So it could not refer to others, even if this other were included under "biodiversity". But the term "implied" denotes "that which is inferred, but was not said or written." That is, it was necessary to talk or write about something else, no longer making it "exclusive".

The result obtained from the above-mentioned variables was as follows:

a) Variable 01:

Table 22 - Indicator "Biodiversity" present directly and indirectly in "Objective Type 1 - Specific Objectives" - Variable 01.

TYPE 1 - SPECIFIC OBJECTIVES of the Management plan	**Biodiversity expressed directly (objective) or indirectly (implied)**
a) Ensure free work area for the extractivists with no bosses	-
b) Avoid invasions in the Exres area	-
c) Preserve the native forest	Implied
d) Ensure the sustainable use of natural resources	Implied
e) To promote access to education and health care for beneficiaries	-

Preparation: Luciana Fabiano.

Nothing related to biodiversity was found in the specific objectives, which were clearly stated in the management plan.

b) Variable 02:

Table 23 - Indicator "Biodiversity" present directly and indirectly in "6 Types of Objectives" that exist in the management plan - Variable 02.

TYPES OF OBJECTIVES that exist in the management plan	**Biodiversity expressed directly (objective) or indirectly (implied)**
a) **Type 1 - Specific objectives** related to the ROP EXRES CU;	-
b) **Type 2 - General Objective** concerning the general program "Environmental and Socioeconomic Sustainability Programs " (PSAS) of the Unit;	-
c) **Type 3 - "Common" Objectives** referring to the programs contained in the aforementioned general program;	-
d) **Type 4 - "Common" Objectives** referring to those subprograms contained in the programs that make up the PSAS;	-
e) **Type 5 - "Common" Objectives** for the "Management Agreement";	-
f) **Type 6 - Strategic Objectives** relating to the subprograms ("d" above).	-

Preparation: Luciana Fabiano.

As in the variable 01 analysis, variable 02 does not present any specific goals related to biodiversity that have been clearly stated in the management plan. To be objective, the indicator "biodiversity" was only found six (6) times throughout the entire management plan, a number considered insufficient to emphasize the importance that the term connotes. The indicator "biodiversity" appears in the following locations of the management plan:

a) In the presentation (p. 9) - 1 time.;
b) In the introduction (p. 10) - 1 time.;
c) In Section 3 entitled "Characterization of the Unit" (p. 15; 16) - 2 times;
d) In the "Research" subprogram (p. 133) - 1 time.;
e) In the conclusion (p. 145) -. 1 time.

In the introduction of the management plan, it stresses the importance of the document for the conservation of biodiversity in the CU, and it is true that biodiversity is important not only for ROP EXRES, but also for society as a whole, for nature, for the environment in general and for the world. Regarding the theoretical scope of the term "biodiversity", see some considerations about its conceptual basis below.

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Biodiversity or biological diversity is all forms of life found on Earth, from microscopic beings like a bacterium to a jaguar (the largest feline in the Americas), so it is a term often used by people concerned with protecting the lives of these beings, avoiding their disappearance.

According to Law no. 9985 from 2000, which created the National System of Conservation Units (SNUC), biodiversity is:

> The variability of living organisms from all sources including, among others, terrestrial, marine or other aquatic ecosystems and the ecological complexes of which they are part; further comprising diversity within species, between species and of ecosystems (BRAZIL, 2000, p. 1).

According to Barbieri, a professor from the University of São Paulo, and oceanographer with licensure in biological oceanography, biological diversity can be defined as:

> The variety of life on Earth, including the genetic diversity within populations and between species, the variety of species of flora, fauna, macroscopic fungi and micro-organisms, the variety of ecological functions performed by organisms in ecosystems and the variety of communities, habitats and ecosystems. (BARBIERI, 2010 p. 7).

They correspond to all forms of life (animal and plant), including genetic variation within populations and between species, their habitats, ecosystems, and ecological processes, all of which are dependent on one another (Barbieri, 2010).

The complex interaction of different species in a natural and continuous cycle should be seen as an inseparable system that benefits all components of nature, including humans. Thus, it is important to protect biodiversity; a small change in this cycle endangers the whole system and can have serious consequences, such as the disappearance of a species.

In the ranking analysis[2] generated in part by the ROP EXRES community, based on the five priority objectives, those chosen related to biodiversity represent the smallest sum of the 67 (sixty-seven) points. When items aimed at the preservation and conservation of biodiversity are taken by themselves, environmental devaluation is noticeable, since of the 264 (two hundred and sixty-four) points from the entire table, only 67 (sixty-seven) of those points are related to biodiversity, and even then, indirectly so.

[2] Table 2, page 22 of this production.

Table 4 - Subprograms directed towards the protection and conservation of biodiversity.

SUBPROGRAMS	POINTS
5 Sustainable Forest Management Plan	18
6 Payment For Environmental Services	17
7 Agricultural Practices	16
11 Training Courses	11
19 Recovery of Degraded Areas	2
20 Protection and Control	2
21 Wildlife Management	1
22 Exres Management	0
Total	67

Source: Adapted from the 2014 ROP EXRES management plan

From the point of view of JEROZOLIMSK (2013) the EXRES should cease to be seen as an area for environmental protection alone, but also as an organization that needs to present satisfactory results, benefiting the local community, users of the reserve and society in general without harming the EXRES's biodiversity.

Through analysis of the 2014 ROP EXRES management plan, in answering the first question of the RAPPAM questionnaire, the inclusion of objectives related to protection and conservation of biodiversity was observed. However, in relation to the second question regarding whether or not "the specific objectives related to biodiversity are clearly stated in the management plan," analysis revealed a negative response.

In order to make these objectives more clear or to include certain new objectives, those found in art. 4 of law no. 9985/2000 can be used as a model, adapting them according to the needs of the unit. For example:

a) Protect species that are threatened with extinction at the regional and national levels;
b) Take protective measures for the reserve's biodiversity;
c) Recover degraded areas in order to restore biodiversity;
d) Promote and encourage scientific research on biodiversity
e) Value the traditional population and their knowledge related to local biodiversity.

It is important to clarify the protective measures of biodiversity against human activities, on extinct and endangered species; protecting biodiversity is protecting the quality of life of living beings, as a supplier of indispensable resources previously mentioned such as water, wood and food, as well as being essential for the

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maintenance of the ecological balance. Leaving its protection implied, as it currently is in the ROP EXRES management plan, devalues its importance for the local community, the reserve's direct beneficiaries, depriving extractive culture and the creation of the sustainable use protection unit.

ROP EXRES has an area of 204,583 hectares with various species habituating within it; Table 5 shows some examples of the biodiversity:

Table 5 - Examples of biodiversity in the ROP EXRES

Fauna	**Flora**
Macaw	Acai
Cotia	Copaiba
Tapir	Pitch
Jatuarana	Maparajuba
Peacock bass	Arapari
Peccary	Maracatiara

Source: Adapted from the 2014 ROP EXRES management plan

These are just a few among the many species found on the reserve; thus, a recommendation in the management plan of the execution of a study to accurately identify all the species that make up its fauna and flora is essential, since this will emphasize the impact of the loss of this biodiversity to the world.

As an example of specific objectives related to biodiversity clearly expressed, those established by the Rio Cautário Federal Extractive Reserve in its management plan can be cited:

a) Protect the natural resources necessary for the subsistence of traditional populations, such as the Brazil nut (*Bertholletia excelsa*), the rubber tree (*Hevea brasiliensis*), copaiba (*Copaifera langsdorffii*), among others;

b) Preserve the EXRES's natural resources and biodiversity for provision of ecosystem services such as a carbon reserve, cycling nutrients (fertilizer), maintenance of biological diversity, maintenance of an environmental balance, provision of food, among others;

c) Foster the development of research on the conservation of biodiversity, natural resources and cultural appreciation of beneficiary families in the EXRES

d) Protect the EXRES's chelonians through a specific management program, aiming to contribute to the conservation of different species that exist in the CU (BRAZIL, 2017, p. 279).

The above objectives are easily identified since they make clear their claim in relation to biodiversity, including, in fact, the protection of a specific animal, the chelonian; but it is not enough to protect the biodiversity, since it restricts its field of operation.

The management plan for ROP EXRES, even after identifying the non-occurrence of the appearance of the tapir (*Tapirus* terrestris), included in the list of endangered species, did not include the protection of this or other species among its objectives, such as the peccary (*Tayassu pecari*), another endangered animal. A survey of endangered species could have been done, and their protection and proliferation could have been defined as a specific objective.

The same RAPPAM method that can serve as a guide to develop objectives related to biodiversity since it assesses their biological importance, quantifies endangered or non-endangered species, including those hunted by extractivists themselves, among other issues. RAPPAM also identifies opportunities and threats in order to ultimately determine the targets most in need of attention.

4.3 QUESTION "C" FROM "MODULE 6 - OBJECTIVES" OF THE RAPPAM METHOD: ARE THE PLANS AND PROJECTS CONSISTENT WITH THE OBJECTIVES OF THE CU?

The 2014 ROP EXRES management plan contains several quotes on plans and projects. It refers to some key projects upon the creation of the reserve, regarding occupation of the territory in which it is located, before it was transformed into a natural protected area, more specifically, before it was transformed into an extractive reserve.

In addition to these aforementioned plans and programs, others are contained in the management plan, executed or not, prior to publication of the 2014 ROP EXRES management plan 2014. These passages are portrayed in other published works such as those by Moret (2005) and Ferreira (2009):

> In order to organize the agro-extractive productive process in productive units in ROP EXRES, some agroextractivists, along with the Guajará Mirim bank made possible funding from the National Program for Strengthening Family Agriculture (PRONAF). (MORET, 2005, p. 11).

According to Ferreira (2009), for the purpose of strengthening agroextractivism as an alternative to generate income and improve quality of life, it is understood that various efforts were channeled to ROP EXRES, among them: subsistence farming, the extraction

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of acai, of Brazil nuts, of rubber and planting cassava for the production of its flour. Prevalent in all communities, a small part of the cassava flour production is sold in Guajará-Mirim-RO, contributing to the domestic economy.

In order to promote the development and strengthening of the reserves, agroextractivism programs were developed, from which some residents of ROP EXRES benefited, such as:

a) Monitoring and structuring of production and transportation;
b) Ecotourism;
c) Rubber;
d) National Program for Strengthening Family Agriculture (PRONAF);
e) Beekeeping,
f) Nurseries for the Agroflorestal system;
g) Use of babassu to generate electricity;
h) Seed collection;
i) People's Production Center: production of bio-jewels and crafts; use of by-products of the production chain of babassu, native fruit pulps;
o) Creation of the Agroextractive Energy Cooperative. (FERREIRA, 2009, p. 47).

The projects listed above have been developed over the years, but not all achieved the expected goals. (FERREIRA, 2009)

The object of this study is concerned with the analysis of the objectives contained in the management plan for the reserve. The methodological tool of analysis consists of six (6) questions from the RAPPAM method, a questionnaire internationally applied by various countries to assess the effectiveness of protected area management. In this sense, the plans and projects targeted in question "C" from "Module 6 - Objectives" of the RAPPAM method, are those contained in the management plan, but that establish relationships with the reserve's goals. Therefore, plans and projects that have no connection with the PA's objectives were excluded from the analysis, such as those discussed earlier under this subheading.

It is necessary to record the scope of the meaning of the words "plan" and "project," which are the indicators present in question "C" from "Module 6 – Objectives," prior to analysis.

There is a hierarchical relationship between the words "planning," "plan" and "project". The first is the mental visualization, oral discussion and exploration of ideas: why, how, where, when, what, and who should achieve an objective. The second is the realization of this planning, concretized by the written production of a document that records everything that makes up the planning. It is also known as a program. The last term, project, is a technical, detailed and comprehensive document of how the plan will be put into practice. It is the step by step execution, the procedures to be performed; it consists of a linguistic approach in the future. For this reason, there may be as many projects as there are ideas that come out of planning as indicated in the plan. Finally, it can be said that planning is the theory, the plan or program is the method, and the project is the practical guideline.

The Infopédia dictionary defines the word "plan" as: "all the provisions necessary to implement a project; program." (Infopédia, 2019).

According to the Michaelis dictionary a "plan" is the "set of scheduled operations for a particular purpose", and is defined again as a "program involving government measures to achieve an objective" (Michaelis, 2019).

According to Menezes, a 'project' is a unique development that should present a clearly defined beginning and end and that, when driven by people can achieve their goals while respecting deadlines, cost and quality (Menezes, 2001).

In turn, Vargas (2009) states that a "project" is a non-recurring development, characterized by a clear sequence and logical events, with a beginning, middle and end, which is intended to achieve a clear and defined objective, being led by people within predefined parameters of time, cost, resources involved, and quality.

Norm NBR ISO 10006: 2017 regarding "Quality Management - Guidelines for Quality Management in Projects," defines a project as:

> A single process performed to achieve a goal.
> Note 1 to entry: A project generally consists of a set of coordinated and controlled activities with start and end dates, in accordance with specific requirements, including constraints of time, cost and resources.
> Note 2 to entry: An individual project can be part of a larger project's structure and usually has a set start and end date.
> Note 3 to entry: In some projects, the objectives and scope are updated and features of the product or service are defined progressively as the project progresses.
> Note 4 to entry: The output of a project may be one or several units of product or service.
> Note 5 to entry: A project's organization is usually temporary and established for the project's lifetime.
> Note 6 to entry: The complexity of the interactions between a project's activities is not necessarily related to the project's size. (ISO, 2017, p. 2)

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Based on the above concepts, it is assumed in this paper that the word "programs" used in the 2014 ROP EXRES management plan has the same meaning as the indicator "plans", present in question "C" of "Module 6 - Objectives" from the RAPPAM method. I.e., "plans" and "programs" are equivalent in the following analysis.

In order to answer question "C" of "Module 6 - Objectives" from the RAPPAM method, analysis of the 2014 ROP EXRES management plan found six (6) plans, five (5) projects, one (1) general program, 5 (five) programs and 21 sub-programs, which are presented below.

4.3.1 Plans

Plans found related to the ROP EXRES management plan's objectives were as follows:

Table 24 - Plan for Sustainable Forest Management

1 Plan for Sustainable Forest Management	Chapter	4 Contents of the management plan: management unit
	Subtitle	4.3 Management Agreement
	Item 21 of the Management Agreement	21 The exploitation of timber products is allowed based on the preparation of a Plan for Sustainable Forest Management
	Page	110
	Chapter	4 Contents of the management plan: management unit
	Subtitle	4.7 Environmental and Socio-Economic Sustainability Programs of the Unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Timber products
	Priority actions	Develop Plan for Sustainable Forest Management, focusing on commercial purposes of timber.
	Page	132

Preparation: Luciana Fabiano.

Table 25 – Non-Timber Related Forest Management Plan

2 Non-Timber Related Forest Management Plan	Chapter	4 Contents of the management plan: management unit
	Subtitle	4.3 Management Agreement
	Priority actions	Forest products such as fruits, oils and essences can be extracted for consumption by residents. Their marketing, along with the use of other products, upon approval of this Agreement may be carried out by the locals, in a traditional manner and/or as set forth in the Non-Timber Related Forestry Management Plan.
	Page	110

Preparation: Luciana Fabiano.

Table 26 - Business Plan and Economic Feasibility of Sustainable Tourism

3 Business Plan and Economic Feasibility of Sustainable Tourism	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Tourism
	Priority actions	Prepare the Business Plan and evaluate the Economic Feasibility of Sustainable Tourism.
	Page	133

Preparation: Luciana Fabiano.

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Table 27 - Communications and Marketing Plan

4 Communications and Marketing Plan	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Tourism
	Priority actions	Prepare the Communications and Marketing Plan
	Page	133

Preparation: Luciana Fabiano.

Table 28 - Annual Action Plans

5 Annual Action Plans	Chapter	4 Contents of the management plan: management unit
	Subtitle	4.8 Strategic Planning
	2nd sentence of the 2nd paragraph	In order for this management plan to be put in practice it is necessary that the unit use it properly, detailing the actions proposed in the Annual Action Plans
	Page	136; 142

Preparation: Luciana Fabiano.

Table 29 - Community-Based Tourism Plan

6 Community-Based Tourism Plan	Chapter	4 Contents of the management plan: management unit
	Subtitle	4.8 Strategic Planning
	Subtitle	4.8.2 Strategic objectives and strategic map
	Subtitle	Internal Processes (Do)
	Strategic objectives	Implement Community-Based Tourism Plan
	Page	140; 144

Preparation: Luciana Fabiano.

4.3.2 Projects

The projects found that are related to the objectives of the ROP EXRES management plan were as follows:

Table 30 - Project for Production and Sale of Seedlings

1 Project for Production and Seedling Sale Of	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Other Extractive Products
	Priority actions	Support the planting of single and groups of acai plants, as well as the development of a project for the production and sale of seedlings.
	Page	129

Preparation: Luciana Fabiano.

Table 31 – Projects for the Collection and Management of Seeds from Native Forest Species for Sale

2 Projects for the Collection and Management of Seeds from Native Forest Species for Sale	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Other Extractive Products
	Priority actions	Support projects for the collection and management of seeds from native forest species for sale
	Page	129

Preparation: Luciana Fabiano.

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Table 32 - Fish Farming Project Using Species Native from the Region

3 Fish Farming Project Using Species Native From the Region	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Fishing resources
	Priority actions	Ascertain, through local studies, the potential for and viability of native fish farming projects in the region through net pens in stretches of the Rio Ouro Preto where the practice is possible or through dugout ponds. Especially for the species: Tambaqui, Piau and Jatuarana
	Page	130

Preparation: Luciana Fabiano.

Table 33 - River Repopulation Project

4 River Repopulation Project	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Fishing resources
	Priority actions	Prepare and execute the river repopulation project through the breeding and release of fingerlings into the river
	Page	131

Preparation: Luciana Fabiano.

Table 34 – Planting Project for Marketing and Commercial Management of Native Timber

5 Planting Project for Marketing and Commercial Management of Native Timber	Chapter	4 Contents of the management plan: management unit
	General program	PSAS
	Program	4.7.2 Natural Resources and Productive Chains Management Program
	Subprogram	Timber products
	Priority actions	Seek support for the development of a planting project for marketing and commercial management of previously planted native timber
	Page	132

Preparation: Luciana Fabiano.

4.3.3 Programs

The programs found related to the ROP EXRES management plan objectives were as follows: one (1) general program, five (5) programs and 21 (twenty-one) subprograms, which will henceforth be described.

Table 35 - General Program, programs and subprograms found in the 2014 ROP EXRES management plan that are related to the CU's objectives.

PROGRAM AND SUBPROGRAMS	**OBJECTIVES OF THE PROGRAMS**
1 GENERAL PROGRAM - ENVIRONMENTAL AND SOCIOECONOMIC SUSTAINABILITY PROGRAMS OF THE UNIT- PSAS	
1 Quality of Life and Citizenship Program - divided into nine (9) subprograms:	
1.1 Health Subprogram	Ensure the basic right to health care for the residents of the Exres.
1.2 Education Subprogram	Ensure the right to education for residents of the Exres.
1.3 Housing/living arrangements Subprogram	Improve the quality of the housing for beneficiaries of the Exres.
1.4 Sanitation Subprogram	Improve the quality of life of residents of the Exres through disease prevention.
1.5 Communication Subprogram	Improve communication between communities and municipal headquarters.

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1.6 Culture Subprogram	Promote recovery of the culture and identity of the Exres population.
1.7 Leisure and Sport Subprogram	Encourage the practice of soccer and championships in the Exres.
1.8 Energy Subprogram	Provide electricity to all residents of the Exres.
1.9 Transportation and Access Subprogram	Ensure good access to and provide regular transportation to all Exres communities
2 Natural Resources and Supply Chains Management Program - divided into ten (10) subprograms:	
2.1 Rubber Subprogram	Add value to, improve the quality of and income from rubber tapping.
2.2 Brazil Nut Subprogram	Add value to and improve the product quality of Brazil nuts.
2.3 " Other Extractive Products" Subprogram	Improve the income of Exres beneficiaries through the commercialization of sustainable extractive products.
2.4 Wildlife Management Subprogram	Sustainably and adequately manage species of wild fauna from the Exres that are causing damage to communities.
2.5 Fishery Resources Subprogram	Assess and facilitate breeding of native fish in the Exres for consumption and marketing.
2.6 Food Safety Subprogram - Agriculture	Improve agricultural practices, increasing sustainability, productivity and adding value to the products of extractive reserves.
2.7 Food Safety Subprogram - Animal Husbandry	Improve nutrition and income of Exres beneficiaries.
2.8 Timber Products Subprogram	Improve the income of extractivists through the sustainable management of timber.
2.9 Tourism Subprogram	Involve stakeholders from Guajará Mirim in a sustainable ecotourism experience that strengthens the culture of forest peoples through the principles of solidarity, cooperation and care for the earth.
2:10 Research Subprogram	Promote the development of research within the CU, in various areas of study.
3 Degraded Area Recovery Program	
Does not have any subprograms	
4 Environmental Monitoring and Protection Program	
Does not have any subprograms	
5 Management and Administration Program - divided into two (2) subprograms:	
5.1 Infrastructure and Personnel Subprogram	Provide the Exres with adequate infrastructure and staff, as well as forming strategic partnerships to promote sound management of the CU, in order to enable the other subprograms.
5.2 Land Tenure Subprogram	Consolidate the land tenure for full implementation of the management plan.

Preparation: Luciana Fabiano.

Based on the concepts of the indicators "plans" and "projects", presented earlier in this section, the analysis reveals consistency between them and the ROP EXRES's objectives. The assertion is based on the wording of the text that makes up the objective. The management plan is detailed when appointing its "plans" and "projects" - in the above table called "programs" and "subprograms" respectively. The text goes beyond the indication and characterization of plans and projects, referencing some goals to be achieved with the "strategic objectives", which are by-products of the projects' (subprograms) objectives, as follows:

> Construction of the strategic objectives was carried out, firstly, by prioritizations put forth by Community participants at the workshop, and also based on the objectives of subprograms of environmental and socio-economic sustainability. [...] The objectives of high priority subprograms were transformed into strategic objectives. (BRAZIL, 2014, p.137; 138)

These strategic objectives were formulated based on the objectives of the PSAS program, its five (5) programs and 21 (twenty-one) subprograms.

4.4 QUESTION "D" FROM "MODULE 6 - OBJECTIVES" OF THE RAPPAM METHOD: DO THE CU'S EMPLOYEES AND DIRECTORS OF UNDERSTAND THE OBJECTIVES AND POLICIES OF THE CU?

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During field research it was found that ROP EXRES has only one employee, Mr. Albino Batista Gomes, named as head of the unit by ordinance no. 899/Civil House, of May 14, 2015; Albino has a degree in Business from the "Integrated College of the Central Plateau Educational Union" and in Environmental Engineering from "Salgada de Oliveira University." (UNIVERSE).

He has extensive experience in working in protected areas, and since he was appointed to serve in ROP EXRES has been fighting to protect the unit; proof of this are the various operations in which he participates, such as the operation against illegal extraction of ore which was happening on the reserve.

The chief of the reserve's work and effort are recognized by those with which the partnership is indispensable (environmental police and IBAMA) for execution of his work. Based on his experience and work performed, it is clear that the manager understands the unit's objectives and policies, and the importance of their performance for the socioeconomic development of ROP EXRES.

In addition to his training and experience as a manager, it should be taken into consideration that according to RAPPAM, in the period between 2005 and 2006, more than 83% (eighty-three) understood the CU's objectives and policies, while in 2010 this index rose to 92% (ninety-two).

4.5 QUESTION "E" FROM "MODULE 6 - OBJECTIVES" FROM THE RAPPAM METHOD: DO THE LOCAL COMMUNITIES SUPPORT THE OBJECTIVES OF THE CU?

The 2014 ROP EXRES management plan records in several passages the fact that the objectives are supported by local communities. This is demonstrated by reporting several times over the years, meetings that were held with the community so that the CU's residents could participate in the formulation of the reserve's goals. For example: in 2010 workshops and a general assembly were held, and in 2013 a participatory planning workshop was held.

During the 2013 workshop a representative from each of the communities was chosen (Nova Esperança; Nova Colônia; Ramal dos Macacos; Bom Jesus; Petrópolis; Ouro Negro; Floresta; Divino Espírito Santo; Três Josés; Pompeu; Sepetiba and Nossa Senhora dos Seringueiros). Thus, it became possible to identify the major challenges faced by the reserve in general, taking into account the different characteristics of the communities, in order to ultimately define the plan's fields of action. Each representative, knowing the difficulties of their community, had the opportunity to choose five (5) subprograms' objectives that meet their priority needs.

The subprograms presented to the extractivists were drafted in accordance with IBAMA's Methodological Roadmap for the Development of Sustainable Federal Extractive Reserve Management Plans (2006). The Roadmap is a reference for the preparation of management plans. It contains the Unit's Environmental and Socioeconomic Sustainability Programs (PSAS), the inclusion or exclusion of which is at the discretion of each protection unit, according to the needs and detected threats. The PSAS of the CU ROP EXRES are:

a) Quality of Life and Citizenship Program
b) Natural Resources and Productive Chains Management Program
c) Degraded Areas Recovery Program
d) Environmental Monitoring and Protection Program
e) Management and Administration Program

Each of these programs has subprograms and defined objectives, chosen by the residents as the most important to be achieved in a period of five (5) years. In order to meet the needs of residents, those most affected by the lack of public policies for socio-economic and environmental development of traditional populations, the highest scored objectives are placed in a table, according to the priorities. Several studies advocate the participation of local communities of minority groups such as extractivists, riparians, indigenous peoples and others, in the fight for environmental conservation, combating the loss of biodiversity and the establishment of sustainable practices towards nature. The text by Barros confirms this:

> It is essential to know the considerations of this group of local communities and indigenous peoples for the development of the Brazilian strategy of conservation, since the loss of biodiversity directly affects their livelihood, subsistence and culture and they play a key role in its protection and sustainable use (BARROS, 2011, p. 2).

Participation of the local community brings the reserve's goals closer to its embodiment, by taking into consideration beyond the environmental context, the importance of recognizing the lack of community access to education, health, electricity and even communication, because of the distance between ROP EXRES and the urban perimeter of the city, and the distance from one location to another within the unit itself. With regards to bringing PA communities and Exres' objectives closer together:

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> Preparation of a management plan in close dialogue with society, particularly those directly affected in some way by the presence of the CU, provides an opportunity to put into practice the principles of an ecosystem approach, as proposed by the CBD. This also expands social control over the creation and implementation of public policies and is reflected in the insertion of the CU in their socioeconomic context. It allows, in this way, the protected area, to comply with the SNUC Act's objectives and the performance of a relevant role in promoting development - social and economic - local and regional. (ICMBIO, 2013, p. 19)

Local community participation in the preparation of a management plan is guaranteed by the law established by SNUC and IN No. 7/2017/ICMBIO, which guarantees not only the community's participation, but also that of environmental agencies, researchers and unit managers. Each can have an opinion with a different perspective and contribute to drawing up the plan and its objectives.

IN No 7/2017/ICMBIO establishes the specifics of extractive reserves, sustainable development reserves and other sustainable use protected areas that are home to traditional communities. See some of its additional principles and guidelines:

> a) recognition, appreciation and respect for environmental and cultural diversity of traditional communities and their economic, social and cultural organization systems;
>
> b) recognition that traditional territories are protected spaces of social, cultural and economic reproduction of traditional populations;
>
> c) ensuring the necessary and appropriate means for the effective participation of traditional populations in decision-making processes and their role in the planning and management of extractive reserves and RDS, as indicated by the Governance Group;
>
> d) recognition and appreciation of different forms of knowledge, especially the knowledge and practices of traditional populations;
>
> e) the obligation to seek to improve the quality of life of traditional populations, access to basic services and citizen rights, respecting their specificities and socio-cultural characteristics; and
>
> f) consider that traditional and extractive practices constitute historical processes subject to adjustments, innovation and incorporation of new technologies, respecting the attributes of sustainability and providing ethnodevelopment. (BRAZIL, 2017, p. 6)

Participation of the local community is vital to operational planning, since just by knowing the greatest needs of extractivists it would be possible to develop coherent and tangible planning. However, this does not guarantee that the objectives are achieved, because this depends not only on communities and ICMBIO, but the coordination and integration of these entities with the government, along with a number of factors and social actors working together to overcome the lack of human and financial resources. The objectives must be supported by and developed with community participation, because the unit's residents will be largely affected if the objectives are poorly formulated.

4.6 QUESTION "F" FROM "MODULE 6 - OBJECTIVES" FROM THE RAPPAM METHOD: DO THE MEMBERS OF THE CU'S MANAGEMENT BOARD UNDERSTAND THE OBJECTIVES AND POLICIES OF THE CU?

As provided for in SNUC's Law No. 9985 from July 18, 2000, the management of ROP EXRES should be administered by a "Governing Council" chaired by ICMBio with representatives from various agencies and residents of the reserve, chosen by the extractivists themselves.

The "Management Board" of ROP EXRES consists of 26 (twenty-six) members, among main members and alternates. Twelve (12) reserve communities are part of this list: Nova Esperança; Nova Colônia; Ramal dos Macacos; Bom Jesus; Petrópolis; Ouro Negro; Floresta; Divino Espírito Santo; Três Josés; Pompeu; Sepetiba and Nossa Senhora dos Seringueiros. The following are also part of the board:

a) ICMBIO;
b) Secretary of State for Environmental Development (SEDAM);
c) the Municipal Government of Nova Mamore;
d) National Indian Foundation (FUNAI);
e) Municipal Secretariat of the Environment (SEMMA);
f) Federal Bureau of Police in Guajará-Mirim;
g) Military Police of the State of Rondônia/Environmental Police Battalion
h) INCRA;
i) Rural Assistance and Extension Association of the State of Rondônia (EMATER);
j) Association of Rubber Tappers and Agroextractivists from the Lower Rio Ouro Preto (ASAEX);
k) Organization of Rondonian Rubber Tappers (OSR);
l) Association of Rubber Tappers of the Rio Ouro Preto Extractive Reserve (ASROP);
m) National Council of Extractive Populations (CNS);

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n) Association of Açaizeiro Agroextractivists of Guajará Mirim (ASAGUAM).

According to Decree No. 4340 from August 22, 2002 the board of a conservation unit must have representations of environmental agencies at the federal, state and municipal levels from distinct areas; in addition, it must also have representatives from the community. Given its importance, it is incumbent upon the management board to:

> a) Seek to integrate the CU with other units as well as specially protected territorial spaces and their surroundings; b) Seek to reconcile the interests of various social groups related to the unit; c) Evaluate the unit's budget and the annual financial report prepared by the executing agency in relation to the CU's objectives; d) Issue an opinion in the case of the advisory board, or ratify, in the case of a deliberative council, hiring and terms of partnership with OSCIP (Civil Social Organization of Public Interest), the shared management hypothesis of the CU; e) Monitor management by OSCIP and recommend termination of the partnership agreement, when there are irregularities; f) Speak out about work or activity that could potentially cause an impact on the CU in its buffer zone, mosaics or ecological corridors; g) Propose guidelines and actions to match, integrate and optimize the relationship with the surrounding population or those living inside the unit, as appropriate. (BRAZIL, 2002, p.3)

According to the aforementioned decree the competence of the management board requires extensive knowledge and understanding of different areas related to the context of an Exres. Based on this statement and in accordance with the passage above, it can be inferred about the understanding of the members of the management board that they do understand and have insight; that is, the understand the objectives and policies of the CU. This conclusion assumes that, any entity that is part of the board needs to act, "*sine qua non*", with some skills of cognitive nature, mentioned by the decree itself, according to the passage above. However, this does not remain 100% proven. Here's why:

Based on the method used in this study, namely: analysis through RAPPAM method questions of the 2014 ROP EXRES management plan text , the finding that the management council understands the objectives and policies of the Exres seems obvious, since it is considered a required skill as referenced by Decree No. 4340 of August 22, 2002. Therefore, it may be concluded that only people who have the skills broken down by the decree occupy a place in the management council. For a more accurate conclusion, an investigation "in loco" would be needed, through an interview with a representative sample of the directors, to evaluate the understanding of the members of that board.

The continuation of research on the above topic is necessary to complement this assessment. Because here in this study, ascertaining the relevance related to the text of the management plan is sufficient, since the research methodology proposed rests on the analysis of the text produced by the document entitled "2014 ROP EXRES Management Plan ".

In addition to the decree as legal framework, in discussing the responsibilities of directors, other theorists emphasize the condition of a management board with skills not only to understand but also to go beyond that, to propose solutions to the problems encountered: the management board shall establish and maintain contact with the community and society involved with the reserve, as well as propose solutions to the problems presented. (Novaes, 2014).

Another source supporting the conclusion that the members of the management board understand the objectives and policies of the Exres is the publication of the results of the assessment performed in sustainable use CUs in all of Brazil and Extractive Reserves in all of Brazil in cycles 2005/2006 and 2010 by WWF, IBAMA and ICMBio using the RAPPAM method. According to RAPPPAM:

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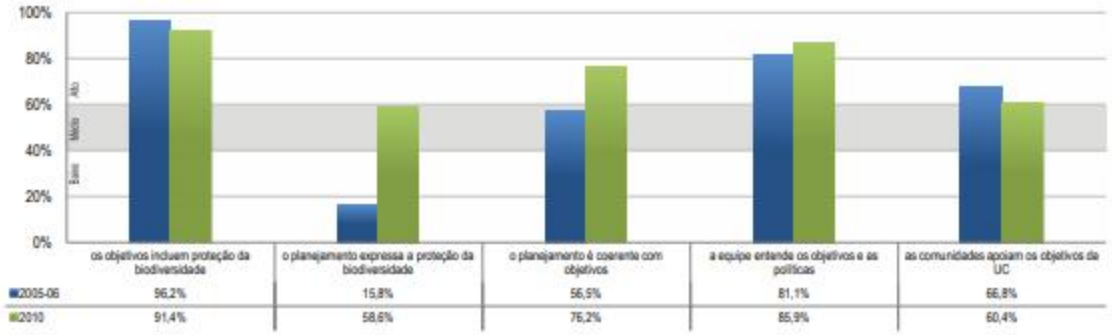
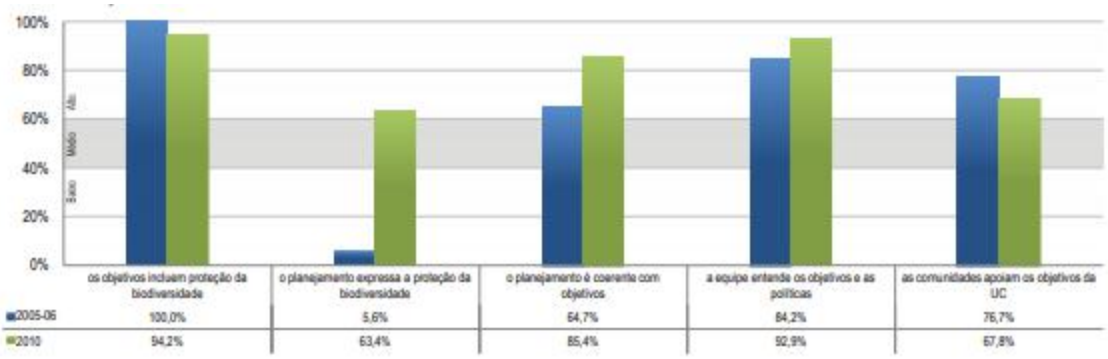
Graph 2 - Understanding of objectives and policies by the management board - level reached by sustainable use protected areas in 2005 and 2010, according to evaluations applied using the RAPPAM method.



Source: RAPPAM Report cycles 2005/2006 and 2010, p. 46.

Graph 3 - Understanding of objectives and policies by the management board - Index reached by Exres in 2005 and 2010, according to evaluations applied using the RAPPAM method.



Source: RAPPAM Report cycles 2005/2006 and 2010, p. 64.

According to the graphs above, on average more than 80% of management board members understand the goals and policies of the CU. Strengthening the board is one of the biggest and most important challenges that the unit may face; it must be managed with legitimacy, legality and efficiency.

The board is required for the development of the reserve, so it is important that its members have insight into the objectives and policies of the extractive reserve, as well as its environmental laws, to be able to express their opinions clearly and accurately when confronted with the CU's problems, as well as, regarding the community's interests, "interactively participating in the management, considering the management plan, using the plan, the PA's objectives and especially the interests of its residents." (ICMBIO, 2013, p. 16). Despite the directors understanding the PA's objectives and plans, compliance to and meeting the goals and plans leaves much to be desired, as provided for ICMBio itself:

> While there is understanding of the purpose and role of the board, perhaps this does not materialize in an integrated performance and in a way directed to achieving the objectives of protected areas, especially for sustainable use PAs, whose objective is to "reconcile nature conservation with the sustainable use of part of its natural resources. (ICMBIO, 2013, p. 17).

Another aspect, no less important than the understanding of the CU's objectives and policies by members of the management board, also regarding the quotation above from ICMBio is the community's understanding of the board's role in the whole context of extractive reserves. This deficit derives from the scope of the board, inferior acting, poor support and incentives by the additional organs.

As important as it is for the members of the management board to understand the objectives of EXRES and know the extractive reserve, because they are part of its management and must be able to solve the problems faced by it, it is just as important that the CU community itself understand the function council members. It is important for board members to make themselves known, as a way to stand before the subjects

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of EXRES, promoting its strengthening and contributing to the development of the CU. The opposite results in lack of community support and weakening the role of the management board before the internal CU population and society as a whole.

V. CONCLUSION

The relevance of this study lies in the fact that the element "objectives" included as part of all protected area management plans, analyzing its characteristics, utilizing questions from an evaluation method used worldwide, a reference to all CUs.

Some intriguing results that were achieved with the study and which deserve to be reported are as follows:

a) analysis of the management plan allowed for the discovery of different types of objectives in the present document, specifically six (6) types, from which, in all, 53 (fifty-three) objectives were extracted;

b) in order to identify different types of goals, we suggest some to be more relevant and the others less relevant. Of the six (6) existing types the most relevant are: i) specific, because they are the permanent objectives of the Exres as a whole, and were established since its creation;

ii) the "Management Agreement" objectives since they outline rules that affect the entire coexistence of the residents as well as the behavior of visitors throughout the area and around the reserve and

iii) strategic, considering that they can be adjusted every five years, according to the needs and changes in the unit.

The others:

iv) objectives of PSAS,

v) objectives of the 5 PSAS programs and

vi) objectives of the subprograms are therefore less relevant.

c) analysis of the ranking of the Exres's priorities[3], as chosen by the residents, revealed an important point: 22 (twenty-two) subjects elected in last place the item "Exres Management ". The observation stems from the fact that the viability of all the other 21 subjects comes through the management team and the CU management. This may demonstrate a lack of understanding about the function and role of managers and the scope of the CU's management, which ends up impeding the fulfillment of the proposed objectives;

d) studying the process that resulted in a ranking of priorities triggering 21 (twenty-one) common objectives of subprograms and twenty (20) existing strategic objectives in the plan, enabled the discovery of some serious inconsistencies that are present in the management plan:

- Knowing that in the election of ranking priorities the following themes were excluded:[4]i) Leisure and sport; ii) research; iii) infrastructure and personnel; iv) Land tenure;
- Given that in the formulation of the strategic objectives obtained from the BSC method, the following were also excluded:[5]i) Housing/living arrangements; ii) Sanitation; iii) Culture; iv) Wildlife management; v) Fishery resources; vi) Food Safety - Animal husbandry and vii) Timber products; consider the following gaps that were found:

1 - The management plan states that[6]the common objectives of the priority subprograms (ranking) have been transformed into strategic objectives, as a result, it claims that other strategic objectives have been included when preparing the mission and vision (BSC methodology) for the Exres's future, and finally it says that all these items have been presented in a final map (strategic map) of strategic objectives. This sequence implies mistakenly, the idea that there is a single map of strategic goals in place, when in reality the goals of ranking priorities and the objectives obtained by the BSC method are still in force because at no time does the plan undo the claim that they are no longer strategic objectives. In addition to the statement on page 138 of the management plan, regarding whether or not the most prioritized objectives in the ranking have been transformed into strategic objectives, the plan presents the strategic objectives from the BSC method on page 140.

2 - On page 138, while it states that the "most" prioritized subprogram objectives were transformed into strategic objectives of the management plan, it does not mention up to which place of ranking was considered as a criterion for the word "most". In addition, the ranking contains 22 places, the subject of "sanitation" appears in 10th place. However, tables 6 and 7, on pages 52 and 53 of this study (adapted from p. 139 and 140 of the management plan), show that the subject of "sanitation" was excluded from the strategic goals. On the other hand, items "Training courses", "Brazil nuts" and "Tourism" which appear respectively in 11th, 12th and 16th place in the ranking, are set as strategic objectives of the BSC method[7] and are automatically part of the Strategic Map[8].

[3]Table 1, p. 09.

[4]Table 2, p. 10.

[5]Table 7, p. 14.

[6] Pages 138 and 139 of RESEX Management Plan ROP 2014.

[7] Page 140 RESEX Management Plan ROP 2014.

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How is it possible that the "most" prioritized items do not include that which occupies the 10th place position and yet include items that are up to six places lower than that in 10th place?

e) The plan presents the five (5) PSAS programs and their objectives, except for one: the "Management and Administration Program." This omission of this objective, recorded on page 134 of the plan and 66 of this text, undermines the presented group causing lack of guidance for those who need to use the plan.
Table 11 on page 57, in which the objectives of the five (5) programs under the general PSAS program are presented, shows that the plan omitted the objective of the last program, the "Management and Administration Program". This omission affects the quality of the management plan, in the sense that it is meant to be a complete document about the objectives that guide the ROP EXRES administration. The objectives must be included in the plan as a way to support the understanding of the various segments comprising the administration of a protected area.

f) Page 123 of the management plan states that there are a total of eighteen (18) subprograms, when in reality the text presents 21 (twenty-one).

Below, we present the results the study sought to answer, regarding indicators of 6 questions from the "Objectives Module " of the RAPPAM method, related to the objectives of the sustainable use CU's 2014 ROP EXRES management plan:

5.1 Do the goals of the CU include protection (i1) and conservation (i2) of biodiversity?
By applying the RAPPAM method a lot can be learned about the objectives of a protected area and whether or not it is fulfilling the social function for which it was created in accordance with its own objectives. In this study in particular, the thematic focus were the objectives present in the 2014 Rio Ouro Preto Exres management plan, because it is the official legal document recording this CU's objectives.

Charts 8; 9; 10; 11; 12; 13; 14 recorded on page 56 of this text show that the objectives of ROP EXRES include the indicators "protection" and "conservation" in its management plan. Based on the concepts formulated by the theoretical study on the scope of the meaning of both indicators, the indicator "protection" appeared within the six (6) types of goals and the indicator "conservation" in 5 (five) of them, with only objective "Type 2 - General purpose" missing it.

Currently the Rio Ouro Preto Exres is threatened by the invasions of loggers and deforestation, often caused by the residents themselves, not finding economic alternatives, increasing their agricultural activities in order to survive. Economic alternatives, with basis in conservation, are urgent to facilitate the maintenance of extractive reserves and to defend the forest. Such evidence shows that the future of extractive reserves, and consequently of the extractive model, depends on the search for economic alternatives that can ensure their future sustainability.

CONCLUSION: The indicators "protection" and "conservation" are very well represented in the 2014 ROP EXRES management plan. They mention the different aspects related to the environment when dealing with the PA objectives, although they are not specific on biodiversity.
5.2 Are there specific objectives related to biodiversity (i3) clearly stated in the management plan?
There were no specific objectives related to biodiversity expressed clearly in the management plan. The study revealed that the term "biodiversity" appeared just six (6) times in the full extent of the management plan. In turn, of these six (6) appearances in only one (1) was the term related to one of the existing 53 goals in the entire plan. This relationship is indirect as shown in one of the listed actions to achieve the objective of the PSAS subprogram, "Research", and is not therefore an end in itself, but rather an action to achieve a goal.

Tables 22 and 23 recorded on page 100 of this text identified that none of the goals are "specifically related to biodiversity." The three (3) variables analyzed: 1) "Specific objectives - expressed directly, objective"; 2) "Specific objectives - expressed indirectly, implied" and 3) "All six types of objectives together - expressed directly, objective" revealed that biodiversity was "implied" only, and even then, only in 2 of the 5 goals under "Objective Type 1 - Specific objectives"; the other 5 existing types did not address biodiversity even indirectly.

The objectives were not formulated directly towards biodiversity, but rather were intended for other specific purposes such as strengthening of agriculture and economic development of the extractive community, becoming recognized for providing environmental services and as a barrier to deforestation in Rondonia, among others, but fortunately measures were also taken regarding protection and conservation.

[8] Page 142 of RESEX Management Plan ROP 2014.

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In this context the management plan loses in terms of quality, because it leaves the impression of having left biodiversity as "plan B". Specific objectives are important to define what exactly is to be reached; it addresses the environmental, cultural, social and economic characteristics of the reserve, as well as reporting the reason for the importance of the Exres and the benefits of preserving its resources.

The results of this part of the study allows us to suggest the Cautário River Federal Extractive Reserve as an example of a Management Plan (BRAZIL, 2017, p. 279) in which biodiversity appears clearly expressed; this could be considered when updating the 2014 ROP EXRES management plan and in the preparation and updating of other management plans for any territory.

Clearly stating the specific objectives related to biodiversity allows all stakeholders and society at large to understand them and identify them. It is also an alternative to clarify to residents about the importance of biodiversity; mainly because subprograms related to protection and conservation were those least chosen during the preparation of the Exres's strategic objectives.

One consequence of this factor is the difficulty in assessing the scope of understanding of society about the importance of biodiversity and in taking measures for its protection, since the management plan implicitly states exactly what and how its objectives will work towards protecting.

CONCLUSION: The term "biodiversity" is absent in the 2014 ROP EXRES management plan. The omission and underrepresentation of the term in the management plan affects the CU's objectives as a whole and the master function for which the Exres itself it was created: for the protection and conservation of biodiversity in that space and territory.

5.3 Are the plans (i4) and projects (i4) consistent with the CU's goals?

The study revealed a very positive result regarding this question. After considering the conceptualization of some authors about what is to be and the difference between plans and projects, the methodology applied identified six (6) plans, five (5) projects and over 27 (twenty-seven) items, between programs and subprograms present in the management plan. According to the definition of the concepts presented, the 27 items related to programs and subprograms are equivalent to plans and projects, respectively.

Another result of the study was consistency among plans and projects with the PA objectives. This result was proven by the following tables:

a) No. 24; 25; 26; 27; 28 and 29 starting on page 107 of this text, which revealed the existence of six plans and their relationship to the objectives of ROP EXRES;

b) No 30; 31; 32; 33 and 34 starting on page 108 of this text, which revealed the existence of five projects and their relationship to the objectives of ROP EXRES;

c) No 35 on page 110 of this text, which revealed the presence of 27 more items from plans and programs, as well as the consistency of their language with the objectives of ROP EXRES.

The management plan is very thorough in relation to its plans and projects, including formulating goals and actions necessary to achieve the objectives related to the Exres. Details are one of the necessary characteristics presented by the concepts indicated about plans and projects, which allows us to state what are and are not plans and projects; they demonstrate step by step procedures to reach an end.

CONCLUSION: The indicators "plans" and "projects" demonstrated a wealth of detail about their goals and their applications in the management plan, coming to meet the aspirations of the CU community. These indicators enable the necessary instruments and help residents and other stakeholders to achieve sustainability in the extractive reserve.

5.4 Do CU employees (i5) and administrators (i5) understand the objectives and policies (i6) of the CU?

The study revealed that the CU in question has only one (1) director appointed through a commissioned position, without effective link, designated by appointment as a position of trust who may be appointed and dismissed in accordance with the interests of public administration, and 0 (zero), hired employees.

Another result of this study was the recognition of a frightening reality: the lack of human resources present in ROP Exres, as well as in protected areas in general.

However, it was found that the only Exres administrator, linked to ICMBio, has extensive experience with the management of the studied unit. He has developed numerous managerial nature activities, establishing the bridge between the Exres, its community and society through public and private institutions, organs and sectors; he has been indicated more than once, both by the Exres community, as well as by the other agencies involved, to the position of CU administrator. It was possible to conclude, therefore, that the only Exres

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administrator does understand the objectives and policies of the CU.

CONCLUSION: The indicators "employees," "administrators" and "policies" revealed a frightening reality about the PA's objectives: a lack of human resources. ROP EXRES does not have a single official. The EXRES has only one director. In turn, the administrator of the EXRES also does not have a team of satisfactory support, and has to share tasks with employees of ICMBio and count on the support of employees from this organization, including: research, internships, provision of temporary services, among others. The lack of human resources impedes the effective implementation of public policies intended for CUs and EXRES like that of ROP.

5.5 Do local communities (i7) support the goals of the CU?

Analysis of the 2014 ROP EXRES management plan concluded that the local community supports the objectives of the CU being studied. Verification of this information was made possible by finding, in the analyzed document, several passages, in which it is stated that the residents of the protected area proposed objectives. The community was able to propose the objectives, and to prepare, evaluate and discuss them by participating at different times in meetings organized and systematized for this purpose, namely, to build the CU's objectives with community participation. This occurred during various types of meetings: encounters, workshops and assemblies, the community was consulted on what the objectives related to environmental, social and economic aspects of ROP EXRES should be.

The study allowed for the above conclusion by identifying the following texts in the management plan:

a) on pages 9 and 10 it appears that preparation of the management plan was carried out through a split consultancy in stages, in which there was always participation of the extractivists;

b) On page 106 community support is again clear, with the definition of the objectives of the Management Agreement, through a participatory workshop held in 2012, analyzed in this paper in subsection 6.5 **"Common" objectives** for the "Management Agreement ".

c) the 6 consultancies carried out between the years 2009 and 2013 demonstrate community support, since they were carried out with the help and participation of extractivists. The management plan talks about this on page 9, in which it relates to the subject using the terms "participatory work." Later the text talks about a "participatory workshop" and continues inserting these indications throughout the entire production of the document;

d) it is also possible to identify this support on page 11, where it is written that the management plan has been prepared in a participatory manner to better develop its content. The fact that most showed community support was the occurrence of the participatory workshop in 2013, when a representative from each community was allowed to choose the goals they considered most relevant to the development of the reserve; it is worth mentioning that these representatives were chosen by extractivists themselves.

e) despite being information not found in the management plan, but rather in the report assessing PA management in the 2005/2006 and 2010 cycles applied in Brazil, it is worth noting: RAPPAM presents the following results regarding the support of local communities to objectives:

i) in sustainable use protected areas in general in Brazil - 2005-2006 66.8% of communities support PA objectives;

ii) in extractive reserves in general in Brazil - 2010 - 60.4% of communities support PA objectives.

Apart from the above discriminated passages, it is important to note that the participation of local communities in the preparation of the management plan is a right guaranteed by law no. 9985 from July 18, 2000, in Chapter VI, Article 27, paragraph 2 and by Normative Instruction No. 7/2017/GABIN/ICMBIO from December 21, 2017, in chapter I, Article 10.

Over the past few years, the importance of participation by traditional communities in CU management has been discussed, not only because they are the major beneficiaries of environmental conservation, but also because they know the harsh reality of those who live in a protected area. Thus, it is very important to listen to them and consider their opinions about these issues. A workshop is considered an educational space in which everyone involved has the opportunity to express their opinions, actively participating in the process of knowledge construction.

CONCLUSION: The "local communities" revealed through the analysis, satisfactory participation regarding support of the goals of sustainable CU. The support is shown by indication of keywords such as general assembly and participatory workshops in addition to several passages in the management plan on participatory construction of the residents of the CU and the

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community being involved in preparing the Exres objectives.

5.6 Do the members of the CU's management board (i8) understand the objectives and policies of the CU?

The result of the study on the last issue of the "Objectives Module" from the RAPPAM method shows that members of the management board do indeed understand the objectives and policies of the CU in question. In view of the analysis methodology used against the Exres's management plan, it can be stated that board members do indeed comprehend the objectives and policies of ROP EXRES. This observation is due to the following findings about the analyses carried out:

a) from the reading of documents and consideration of legal basis, laws and other legislation that set forth rules on the composition of a CU's management board, as well as the functions of their constituent members. Among the main legal instruments used, the analysis consisted of:

i) Federal Law No. 9985 from July 18, 2000 - institutionalizes SNUC;
ii) Decree No. 4340 from August 22, 2002 - regulates the law of SNUC;
iii) Ordinance/ICMBio No. 89 from November 22, 2006 - creates the deliberative council of ROP EXRES;
iv) Ordinance/ICMBio No. 27 from February 17, 2012 published in the Official Gazette Journal of the Union (DOU) from February 22, 2012 - updated creation decree of the ROP EXRES board;
v) the Internal Rules of the ROP EXRES Board. Note: All these legal bases studied were indicated by the management plan.

b) according to Decree No. 4340 from August 22, 2002 Chapter V, paragraphs 1 and 2, the board should be composed of representatives from various environmental agencies and non-governmental organizations with egregious scientific knowledge and experience in areas related to environmental protection. In compliance with the decree, the ROP EXRES council consists of representatives of various bodies, from ICMBio to the Federal Police. A complete list of council representatives is contained on page 118 of this text and on pages 103 and 104 of the management plan. The list is made up of representative bodies of important segments of society, both public and private. Analyses of the management plan, when presented with the information listed above, made it possible to conclude that the representatives have complete capacity to understand the objectives and policies of the PA;

c) the competency of the board members is also shown on page 103 of the CU's management plan, where a series of complex activities that are board responsibilities is listed, which, without knowledge of how public administration works, board members would not be able to carry them out. Just to get a sense of some of these activities, they involve evaluating the unit's budget and proposing guidelines for the integration of the relationship between Exres communities.

d) Another important piece of data is the fact that some agencies with representatives on the board, chose candidates using highly complex public exams, requiring knowledge in many areas of science.

e) in turn, another analysis, a secondary one, yet something that supports the findings in this part of the study was the consideration of the RAPPAM method's own graphics, applied in the 2005/2006 and 2010 cycles in ROP EXRES, which allowed by analogy to make a conclusion regarding the understanding of the board members regarding the Exres's goals. Analysis of the graphs found on pages 46 and 64 of the RAPPAM report from cycles 2005 to 2006 and 2010, and in this text on page 120, allowed for conclusions regarding the understanding of the members of the management council on the objectives and policies of ROP EXRES.

f) Finally, another indicator to corroborate the conclusion that the members of the management board understand the PA's objectives is the statement in the management plan that ICMBio itself, an institution considered to be the greatest authority on preservation of protected areas in Brazil, is the chairman of the board of ROP EXRES. Established by law 11,516 of August 28, 2007, ICMBio since its inception, has improved performance in CU protection. The legal document designed to regulate the establishment and operation of the management councils of PAs, Normative Instruction No. 7/2017/GABIN/ICMBIO of December 21, 2017, is authored this organization.

CONCLUSION: Confirmation of understanding of the CU's objectives by the members of the ROP EXRES Board, a result with the indicator "management board", was earned in accordance with the regulatory norms on the subject, which are incisive in confirming the skills comprising the aforementioned council. According to the list of members that make up the CU's management council studied, registered in the ROP EXRES management plan and the authority of the acronyms that name the institutions, and by reference to the skills of the board indicated by the legal norms governing the matter,

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it was concluded that the management council understands the objectives and policies of the CU.

5.7 Epilogue

Finally, the methodology for identification of strategic objectives, broken down by the management plan, proved to be easy to use and understand: an election of the objectives considered of highest priority for the community, among those that were already in place as objectives of the Exres's plans, programs and projects, indicate the top voted as strategic objectives. However, the plan fails in the application of the method when it excludes the objective that occupies the 10th place in the ranking elected by the residents, the objective "sanitation", and includes in the Strategic Map of the Reserve three (3) other elected goals in positions lower than 10, specifically: "Training courses", "Brazil nut" and "Tourism", 11th, 12th and 16th respectively in rankings.

In addition to the above, the bottleneck steps used to reach the strategic objectives obey the following order: ranking goals, BSC method strategic objectives and the Strategic Map. In the structure of the ranking, four (4) objectives are excluded, including "Land tenure - consolidate land regularization of the Exres for full implementation of the management plan," objective discriminated on page 136. It turns out that the goal "Remedy the land situation" reappears as a strategic objective in the list of the BSC method, and therefore is part of the strategic Map.

The objectives of the management plan were harmed in the sense that there is great confusion about the design and effectiveness of its main objectives: the strategic ones. The strategic objectives are very important in a CU because they are considered of highest priority according to the community's main needs.

5.8 Suggestions

As a contribution to improve the development of objectives that permeate the Pas' Management Plans in any area of interest, this study makes three suggestions:

a) The inclusion of a greater number of objectives focused on the "sustainable development" as the main factor of development is recommended, especially when dealing with strategic objectives, in order to configure the objectives aimed at meeting the community's needs, as was found in just 11 instances of a total of 53 objectives present throughout the plan, namely:

I) Specific objectives (1 from the existing 5):
Ensure sustainable use of natural resources - p. 17;

II) General Purpose of the PSAS program (1 1):
Aim to promote environmental conservation, sustainable management of natural resources, value culture and improve the quality of life of the traditional population - p. 123;

III) Common objectives from the PSAS programs (one from the existing 4):
Natural Resources and Productive Chains Management Program
Objective: To promote environmental conservation and sustainable management of natural resources in the Rio Ouro Preto Exres- p. 128;

IV) Common Objectives of the PSAS subprograms (5 of 21 existing):
b.3 "Other Extractive Products" Subprogram
Objective: To improve the income of the Exres beneficiaries through the commercialization of sustainable extractive products - p. 129;
b.4 Wild Animal Management Subprogram
Objective: To sustainably and adequately manage species of wild fauna from the Exres that are causing damage to communities - p. 130;
b.6 Food Safety Subprogram - Agriculture
objective: To improve agricultural practices, increasing sustainability, productivity and add value to the products of the Exres - p. 131;
b.8 Timber Products Subprogram
objective: To improve the income of extractivists through the sustainable management of timber - p. 132;
b.9 Tourism Subprogram
objective: To involve stakeholders from Guajará Mirim in a sustainable ecotourism experience that strengthens the culture of forest peoples through the principles of solidarity, cooperation and care for the earth - p. 132;

V) Common Objectives from the Management Agreement (1 of 2 existing):
a) To ensure the self-sustainability of the EXRES by regulating the use of resources and behaviors to be followed by the locals - p. 107;

VI) Strategic Objectives (2 of 20 existing):
BSC method references: Internal Processes
Keyword: Do
15) Facilitate the Plan for Sustainable Forest Management (PMFS) - p. 140
17) Obtain administrative and financial self-sustainability (associations) - p. 140

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b) The use of the questions from "Thematic Module 6 - Objectives" from the RAPPAM method is recommended as a reference, in the construction and improvement of management plan objectives in order to measure the quality of these objectives and in order to reach them.

c) It is recommended to update the 2014 ROP EXRES management plan objectives predicted after the year 2019, a readjustment in the presentation of the strategic objectives, more resolute content with only textual aim, taking care not to impair the management plan's objectivity and automatically the sustainable development of extractive reserves.

d) It is further recommended the introduction of the term "biodiversity" on a larger scale and more explicitly, in view of the importance of its significance for the community, for society, for ROP EXRES, for PAs in general, for the protection of nature and the environment as a whole.

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