

# NEEDS, EXPECTATIONS AND REQUIREMENTS FOR FIELDWORK

Version 02.2018

## *Biodiversity Research Consortium Brazil-Norway (BRC)*

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## **1. INTRODUCTION**

This document aims to introduce the updated version (2018) the General Management of Health, Safety and Environment (GEHSE) to Hydro Paragominas Board and members or associates of the Biodiversity Research Consortium Brazil-Norway (BRC). In addition, all persons interested in a report about the formal requirements (health, safety and environment) and available resources (transport, eating and accommodation logistics) for researches and other activities done in the mining area of Hydro Paragominas, both forested areas and bodies of water, in order to perform a successful, high quality and safe work.

## **2. BACKGROUND**

Hydro has a commitment to do and provide to all its collaborators, direct or indirect, a safe and high quality working conditions. Therefore, Hydro Paragominas recognized the need for a document, liable of periodical updates at all hierarchical instances (for all partner institutions), that establishes the guidelines for the following activities of the BRC:

- Formal Requirements of Health, Safety and Environment (HSE)
- Transport logistics
- Accommodation logistics
- Eating logistics
- Entrance of materials in the plant; and
- Conditions of permanence in the unit and execution of research activities

## **3. INSTITUTIONAL REQUIREMENTS**

This topic will present each one of the quoted formal requirements on topic II of the document.

### **3.1 – HEALTH, SAFETY AND ENVIRONMENT (HSE)**

In the mining area of Hydro Paragominas, there is a specialized service in Safety engineering and occupational medicine (SESMT). It is part of the occupational health and medical program. The main objectives are the attendance of occupational programs and the prevention of accidents at work. In addition, there is also a first aid post with all medical

professionals (doctor, nurse and nursing assistant) and ambulances. All the resources are available 24h per day in prompt service and reports to the Management of Health and Laboral Safety (GASDT)

Regarding the environment, the company has a management of environment (GAMAS) group. The professionals of this group work with biotic (fauna and flora), abiotic factors (water resources, air quality, noise and residues), legal procedures for the mining operation (environmental licensing) and society (environmental education).

The administration is at your disposal for orientation and consultancy about contracts, work inside the mining area and for emergency due to environmental or occupational occurrence.

The next topic will present the mandatory requirements for activities inside Hydro Paragominas area.

### **3.1.1 – Health and Safety**

According to Hydro INS 18.014 tool, which establishes the management of health and occupational safety (SSO), it is applicable to all service providers for Hydro Paragominas to comply with the following legal rules:

- Compliance with Mining Regulatory Standard nº 22 (NRM 22), which defines the minimum workload of 3 days, eight hours per day for employees and collaborators preparatory ambience to the mining area. Some activities require specific trainings and also other safety tools, as Work Permit, Preliminary Analysis of Work (APT), Block Requester, Risk Analysis, Confined Space, STOP card and others.

The trained contractors provide a safer workplace at the company and avoid accidents. It is obligatory to present an occupational health certificate (ASO) and all other complementary exams to prove aptitude for the execution of the proposed work.

In specific cases (visits to the mining area, for example), BRC and the Management of Health and Laboral Safety (GASDT), may do the mining ambience, that it is shorter than the introductory. In addition, experienced Hydro Paragominas staff will follow all visitors or collaborators (Brazilian or non-Brazilian) in the beginning of the activities in the mining site.

Hydro Paragominas is able to present the HSE introductory both in English as Portuguese. Otherwise, it is necessary to schedule the training in at least 20 days in advance.

- Conformity with Regulatory Standard nº 6 (NR-6), the use of Personal Protective Equipment (PPE) protects from threats to the safety and health at the workplace. The project contract must have the list and acquisition of PPE. Each project must include all PPE in its own budget. Hydro Paragominas may store the equipment.

During visits, Hydro may lend the Personal Protective Equipment, but the demand should be informed 15 days ahead in time.<sup>1</sup>

- Compliance with NR-7, which defines as obligatory the elaboration and implementation of the Program for Medical Control of Occupational Health (PCMSO) for all employers and institutions in order to protect the health of work group. The PCMSO will present all the required exams for each job position and all obligatory vaccines to each collaborator.

It is important to consider that the PCMSO will present all the examinations inherent to each position, as well as the vaccines that must, necessarily, be considered for the collaborators.

- Conformity with NR-9, which is mandatory the elaboration and implementation of the Program for Environmental Risk Prevention (PPRA) for all employers and institutions. It aims to anticipate and recognize the environmental risk. The prevention empowers the control of the threats in the workplace and protects the natural resources.

- Compliance with NR-22, which says that the mining must have traffic project with the preferential movement, minimum distance from machines, adequate equipment and vehicle for the safety and allowed speed limit compatible with the lane conditions. Besides the defensive driving course, it is obligatory to complete an off-road course to drive a pick up (4x4). It assures the ability to drive safely in rough terrains.

- Conditions of Permanence and Execution of Activities: It is very important to reinforce that the complexity of the mining operational processes and their associated activities, generate an considerable occupational risk level in the MPSA, due that Occupational Safety Management (GESHE) establishes a series of guidelines that must be compulsorily met by all professionals (regardless of the type of link with MPSA: employee, outsourced, researcher, consultant, technical visit, subcontractor, contractor and others). It is also understood that all those linked

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<sup>1</sup>**Example of specific case:** A researcher on a short time visit (Brazilian or non-Brazilian) will participate of a 3h course and it is valid for two months. If the person will stay more than 15 days in the area, the 3 days course is mandatory.

to MPSA are carrying out their tasks, assignments and activities spontaneously and aware of these conditions. Reiterating that MPSA practices and guarantees the respect for diversity and preserves the identity of all professionals involved in any activities in the unit. Thus, it is expected the observation with the use of PPE, compliance with traffic directives (and their conditions for traffic), completion of APT (or compliance with those established in the activity PROs), to keep safety documents updated (PPRA, PCMSO , ASO, among others), non-use of adornments, non-use of tools and chemicals not authorized or without environmental and occupational controls provided, among other HSE guidelines, properly presented in safety courses, introductory, institutional videos, verbal guidance, among others sources of direct or indirect communication.

- **Emergency Care Plan of Activities (PAE)**

In view of the justification for possible turnover of employees and employees of the approved projects, Hydro Paragominas suggested a proposal to simplify the procedures for signing the agreement, always in accordance with all legal and security requirements for the parties involved in any activities, is related to prompt service in the event of an accident.

When Hydro Paragominas signs a contract with a company or institution, it must provide all the employees with health insurance. It assures the prompt service in case of any accident during the work.

The turnover of collaborators makes the providence of health insurance to UFRA, UFPA and MPEG difficult. The GASDT of Hydro Paragominas suggested the elaboration of a document named Emergency Care Plan in cases of accidents with injuries to the collaborators.

There is no standard for this plan, otherwise it must include all the risk scenarios of all BRC activities. As presented in meetings, the Hydro Paragominas supports facilities and assistance is available for the collaborators, although the support is limited to the transport of the patient until a prompt service in the city. The research institution is responsible for assuring the treatment. If these guidelines are not followed, the HSE manager of Hydro Paragominas will implement warnings and sanctions.

The document requires the signature of a specialist professional in work safety, who knows and understands about the project activities for the correct quantification of potential risk scenarios.

- **Letter of Responsibility in Medical/Hospital Assistance**

The Emergency Care Plan must include a Letter of Responsibility in Medical/Hospital Assistance. The content of the letter attests that the contracted institution is responsible for the health care of its collaborators in case of accidents during the BRC research activities. The

contracted institution is also responsible for all external logistics (doctor, transport, care, support, removal, medicines, procedures and others).

Hydro Paragominas suggests the project coordinator to elaborate and sign the document. The coordinator needs to know all the persons involved in the project. The letter requires the signature of a doctor (or equivalent healthcare professional) that is responsible for assistance logistic.

### **3.1.2 – Environment**

Concerning environmental aspects, it is obligatory to obtain updated certificate for the collection, transport and destination of biological material. Some important documents are:

- Authorization of the Chico Mendes Biodiversity Conservation Institute (ICMBio)
- The researchers must be registered at authorization and information in Biodiversity System (SisBio).
- Federal Technical Register (CTF) issued by IBAMA to the Researchers/Collectors
- Declaration of acceptance from a depository institution for the collected material
- Authorization to transport biological material (if applicable)

All the fieldwork collection (methodology, materials, methods and collected group) must be performed in accordance to the institution that issued the research to collect.

After each fieldwork campaign, it is necessary to do a full report with at least the following topics:

- Dates of activity
- Collectors
- Asset Registration Number at the institution that received the material
- After identification of the material, report the collected species (or closer taxon)
- Depository institution of the material. If the material was submitted to another research institution, the report needs to set the current location.
- Declaration of responsibility for the information provided (Form will be defined)
- A photographic record of activities for Hydro Paragominas , to include in its collection of images (not used for publication purposes or anything related).

It is expressly forbidden to collect of any material without the consent or previous authorization of the headship. The same rule is applicable to the vegetal suppression of restoration areas.

The researcher can only send the collected samples to enrolled depositary institutions/biological collection in the National Register of Biological Collection (CCBio). The receiver of the material must comply with Art. n° 22: National Service Collection or Depositary may receive microbiological material and, if necessary, the researcher institution may deposit in reference collection abroad.

### **3.2 – Transport logistics**

The contract between Hydro Paragominas and the institution established the transport for the execution of the Consortium activity. The document includes the terms for use, acquisition, rent, kinds of transport, responsibility for the fuel and maintenance of the vehicle.

However, it is suggested that all projects initiated after this review date, have vehicles and drivers qualified, and must have safety requirements and other training, appropriate for the activities.

#### **3.2.1 - Requirements for Vehicles to access Hydro Paragominas**

The minimum requirements for vehicles to access the Hydro Paragominas mine, provided for in Normative Safety Instruction INS 18.002 (Traffic Regulations) are presented below.

- Seat belt for all occupants of the vehicle in the front and rear seats (the use of clips is not allowed);
- Head restraint for all occupants of the vehicle in the front and rear seats;
- Airbag for occupants of the front seats;
- Have four-wheel Anti-lock Breaking System (ABS);
- Fire extinguisher PQS or ABC;
- Supplementary brake light mounted high in the rear of the vehicle;
- Laminated front glass;
- Can have any color, except red;
- Reverse sound warning coupled to the reverse drive system;
- Rear window protection grill / cargo insulation (for truck-type cargo vehicles);
- 4x4 vehicles;
- Roll-over protection: Pick-up vehicles must have internal and external Roll Over Protection System (ROPS);
- The vehicles must be with their standard identification (TAG), according to the model stipulated and controlled by SESMT Hydro, identification on the sides, front and rear.

### 3.2.2 - Requirements for Drivers to access Hydro Paragominas

According to Normative Safety Instruction INS 18.002 (Traffic Regulations), only drivers who have their definitive authorization can participate in the training to drive vehicles in the areas of Hydro Paragominas, and the provisional CNH is not accepted. The selection should be made seeking the greatest possible restriction of people, in order to reduce risk exposure.

Drivers conducting pick-up in the pipeline, transmission line, dams and mine operation must have a certificate of off-road driving training, with recycling every 05 (five) years or at lower frequency in exceptional cases or by determination of the unit security committee.

It is mandatory that the speed limits are respected, as well as what is established in the Brazilian Traffic Code (CTB), as well as all other items in INS 18.002, attached to this document

### 3.2.3 – Alternative Transport

If the planned activity does not have an agreement signed, Hydro Paragominas has a transportation logistics from the city of Paragominas to the Plateau Miltônia 3 and internally the mine, which may be offered for transportation of people, but each case should be evaluated according to the existing routine.

It is important to consider that, regardless of the mode of transportation, if the activity is not foreseen in an agreement signed between Hydro Paragominas and the Research Institution, the information of the area visit must be scheduled in advance of 10 days.

If the visit is made up of more than six (6) people, it is suggested that those responsible for the visit hire a van or similar vehicle accessing the mine (mandatory safety requirements).

### 3.2.4 – Intercity transport

The transport expenses of any kind to the city of Paragominas must be paid by the contract (budget) between the BRC member and Hydro Paragominas.

### 3.2.5 – Transport to Paragominas

At Paragominas, Hydro may provide round trip by bus free of charge from the mine to the city, if necessary to collaborators. The timetable is:

<b>BUS</b>	<b>ARRIVE ON HYDRO</b>	<b>DEPARTURE FROM MINING</b>
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<b>Administrative</b>	07h30	16h47
<b>1º round</b>	23h55	08h14
<b>2º round</b>	07h40	16h40
<b>3º round</b>	16h00	00h40

There is also public transport with the same quality standard as the buses of the company, although the timetable is different. The price is R\$ 15,00 one-way.

<b>Miltônia Public Transport Timetable - Monday to Friday</b>			
<b>Departure from Paragominas</b>	<b>Arrival at the mining</b>	<b>Departure from the mining</b>	<b>Arrival at Paragominas</b>
01h00	02h30	02h40	03h50
06h30	08h00	08h40	10h00
10h00	11h30	12h40	14h00
14h00	15h20	15h20	16h40
16h40	18h00	18h00	19h20
19h20	20h40	20h40	22h00

<b>Weekends</b>			
01h00	02h30	02h40	03h50
06h30	08h00	08h40	10h00
10h00	11h20	11h20	12h30
16h40	18h00	18h00	19h20
19h20	20h40	20h40	22h00

### 3.2.6 – Transport in the mine

If there is no vehicle solicitation in the agreement for the transport inside the mine, the person in charge for the visit may inform GAMAS in advance.

The history of visits since the existence of BRC indicates the normal fleet vehicle may transport the maximum number of six people at Hydro Paragominas. Otherwise, the program of the visit may be evaluated to certify the number of vehicles for the demand.

If the visit involves more than six individuals, the person in charge for the visit may rent a vehicle (van or pickup – depends on the number of visitors) with all the obligatory safety equipment for the transport to the desired area.

GAMAS and third part collaborators are committed to give the necessary support as escort or guide during the visit.

### 3.3 – ACCOMMODATION LOGISTICS

Expenses for accommodation and hotel services in any place should be contained in the costs (budget) of the agreements to be entered into between the BRC and Hydro Paragominas, but Hydro Paragominas has accommodation with 06 (six) rooms , which can meet the demands of the researches.

Currently, the schedules of stays are made from a spreadsheet that are presented to the researchers and they select the period of desire. If there are conflicting dates, the projects must adapt to the periods and availabilities.

It should be noted that about 10km away from the Hydro Paragominas concierge, there is the Hotel Beija-Flor, which seats a small number of people as well. However, this hotel does not have management of Hydro Paragominas, and any agreement of stay and availability of rooms, should be dealt directly with the owner.

### 3.4 – EATING LOGISTICS

Hydro Paragominas offers meals free of charge in the refectories. The services, place and timetable are:

Services	Refectory	Timetable
Breakfast	Central (located on administrative área)	06:00 until 07:00
Lunch		11:00 until 14:30
Diner		18:00 until 21:30

The company offers meals in accordance to the job position and the workload of the collaborators. Some practical examples are:

- Employees that work on the administrative shift can have lunch;
- Collaborators that start the working hours before 7:00 am may have breakfast;
- The dinner is only for employees that work on the night shift.

### 3.5 – UTILITY CONTACTS OF HYDRO PARAGOMINAS

#### First utility contact

**Name:** Cícero Viana Neto

**Job position:** HSE manager

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#### Contact support 01

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#### Contact support 02

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#### Contact support 03

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### 4 – ACRONYM

**GEHSE** Gerência Geral de Saúde, Segurança e Meio Ambiente

**BRC** Consórcio de Pesquisa em Biodiversidade Brasil-Noruega

**HSE** Health, Safety and Environment (Saúde, Segurança e Meio Ambiente)

**SESMT** Serviço Especializado em Engenharia de Segurança e em Medicina do Trabalho

**GASDT** Gerência de Área de Segurança do Trabalho

<b>GAMAS</b>	Gerência de Área de Meio Ambiente
<b>SSO</b>	Saúde e Segurança Ocupacional
<b>NRM</b>	Norma Regulamentadora da Mineração
<b>NR</b>	Norma Regulamentadora do Ministério do Trabalho
<b>APT</b>	Análise Preliminar de Tarefa
<b>ASO</b>	Atestado de Saúde Ocupacional
<b>PCMSO</b>	Programa de Controle Médico de Saúde Ocupacional
<b>PPRA</b>	Programa de Prevenção de Riscos Ambientais
<b>IBAMA</b>	Instituto Brasileiro de Meio Ambiente e Recursos Renováveis
<b>SisBio</b>	Sistema de Autorização e Informação em Biodiversidade
<b>CTF</b>	Cadastro Técnico Federal