

# **RIO DOCE INDEPENDENT SCIENTIFIC AND TECHNICAL ADVISORY PANEL (ISTAP)**

## **PANEL TERMS OF REFERENCE**

Final - July 19, 2017

### **1. BACKGROUND**

#### **Samarco**

Samarco Mineração S.A is a Brazilian company, established in 1977. It has been mining and processing iron ore in the mountains of Minas Gerais state for almost 40 years. BHP and Vale own Samarco in an equal 50/50 JV arrangement.

Samarco's industrial facilities include three concentrators at the Germano unit in the municipalities of Ouro Preto and Mariana in Minas Gerais, and four pellet plants and a sea port in Ubu, Espírito Santo, on the coast. These two units are connected by three pipelines, of some 400 km each, which transport the iron ore slurry from Minas Gerais to Espírito Santo, crossing 29 municipalities. The tailings residue (95% iron and silica) from the crushing process was stored in tailings dams adjacent to the operations. The original and largest of the two dams was decommissioned in 2008, when the Fundão Dam commenced operation.

In November 2015, Samarco employed around 6,000 people (employees and contractors) and was the largest contributor to the regional economy in the Mariana municipality. Samarco was recognised as a leader in the Brazilian mining industry for its commitment to high standards of health, safety, environment and community.

#### **Fundão Dam Failure**

On 5 November 2015, Samarco's Fundão tailings dam, containing approximately 55 million m<sup>3</sup> of tailings failed. As a result, 32 million m<sup>3</sup> of tailings left Samarco's site, destroying towns, impacting aquatic fauna, vegetation, and agricultural land. Most sadly, nineteen people lost their lives in the incident, including 14 Samarco employees/contractors, 4 residents and 1 visitor of the Bento Rodrigues community.

The tailings travelled down the natural waterway, overtopping the Santarem water polishing dam and partially destroying it, and flowed on to the township of Bento Rodrigues ~8 km from the Fundão structure. The debris torrent reached Bento Rodrigues around 40 minutes after the failure.

The material continued to move downstream through the 650 river kilometres of the Rio Doce before reaching the coast 17 days later.

The released material entered a large river network: Rio Gualaxo do Norte, which discharges to the Rio Carmo, which in turn flows into the upper Rio Doce. Along the flow path soils were scoured and vegetation removed, resulting in a mix of tailings, soils, and vegetation being deposited both along the river flood plain and along edges and mouths of tributaries as the flood wave receded and/or flow velocities slowed in certain areas.

Of the 32 million m<sup>3</sup> of tailings that left Samarco's site, about 26.5 million m<sup>3</sup> was deposited between Fundão to the Candonga Reservoir at Risoleta Neves hydro-electric power station and 5.5 million m<sup>3</sup> followed the course of the river for 537 km until the mouth of the Rio Doce, in Regência (ES).

Finer materials and other suspended solids exited the reservoir via the dam spillway. Some of these suspended sediments settled out within the Rio Doce, between the Candonga Dam and the next hydroelectric reservoir (Baguari) located downstream of Candonga. Smaller sediment particles remained in suspension along the mid and lower sections of the Rio Doce, to the mouth of the river and the Atlantic Ocean. A plume of water characterized by greatly elevated suspended solids from the breach event was visible at the estuary and into the marine environment, as the freshwater plume from the Rio Doce spread over the denser seawater.

### **Upstream Impacts**

Sadly, nineteen people lost their lives as a result of the dam failure including 14 employees/contractors working on the dam at the time and 5 members of the Bento Rodrigues community.

The tailings spill caused extensive damage to the natural environment, communities and associated infrastructure along the Rio Doce. The most significant impacts occurred in the first 80km of the river system (tributaries of the Rio Doce) before Candonga Dam, a hydro-electric power station on the Rio Doce.



Figure 1: From Fundão Dam to the mouth of Rio Doce

The failure resulted in the almost total destruction of the towns of Bento Rodrigues (population approximately 400), Gesteira (population impacted ~30), a large section of Paracatu (population impacted ~100) and significant damage in the community of Barra Longa (population impacted ~170). This rendered a total of around 700 people homeless. Local businesses were also destroyed or significantly impacted including farmers, restaurants and hydro power stations.

Other upstream impacts included:

- Destruction of 7 bridges and significant damage and no access to >100km of access roads.
- The destruction of 2000 ha of riparian vegetation and agricultural land.
- Deposition of around 10 million m<sup>3</sup> of tailings material along the banks of the rivers.
- Very significant impact on aquatic fauna including extensive fish kill.
- Deposition of around 10 million m<sup>3</sup> of sediment in the reservoir of the Risoleta Neves (Candonga) hydro-power station rendering it inoperable and increasing its risk of failure.

### Downstream Impacts

Downstream of Candonga dam the impacts are primarily related to water quality issues rather than the physical impact of the tailings deposition. The main impacts are summarised below:

- The dam failure released a plume of mud and highly turbid deoxygenated water that resulted in a fish kill throughout the river system.

- As well as killing fish in the river, the sediment adversely impacted on the water supply systems in the communities and towns along the river. These towns included Governador Valadares, a town of around 300,000 people. The interruption to water supplies was relatively short (a week or two) and in most towns alternative drinking water supplies were provided, yet many people in these communities suffered disruption to their quality of life as a result of the impact.
- A number of significant businesses suffered some disruption during the peak of the plume and many smaller businesses have suffered more prolonged impacts, such as fishermen who are no longer able to fish in the main river channel and sand miners who previously made a living taking sand from the river.
- High turbidity levels have persisted in the river system, particularly in the upper reaches, and are continuing to impact on the ability of river dependent communities, primarily fishermen but also tourism operators to continue their businesses.
- The turbidity plume reached the mouth of the Doce River on 21 November 2015, during the sea turtle spawning season and potential impacts on the turtles are yet to be identified. Initial biodiversity studies indicated a reduction in density and species diversity of benthic organisms in the coastal area however an analysis of studies suggests that impacts on phyto and zooplankton will be temporary and reversible. All studies indicate the need to continue monitoring of potential plume impacts within the coastal aquatic communities of the region.

### **Renova Foundation**

The purpose of the Renova Foundation is rebuilding, restoring and repairing the impacts caused by the Fundão Dam collapse.

Samarco instigated emergency measures to mitigate the consequences of the dam failure, such as making temporary accommodation available for the families who lost their homes, distributing financial aid cards and providing for students from impacted communities so they could return to school. Teams were mobilized to address water supply issues and to undertake fauna and flora rescue, recovery of affected areas, water monitoring, and assistance to residents, among other measures.

All these actions were initially performed by Samarco and were later consolidated in the Framework Agreement signed between Samarco, its shareholders, Vale S.A and BHP, the Federal Government, the governments of the states of Minas Gerais and Espírito Santo and other

governmental entities, on 2 March 2016. The Agreement prescribes 42 short, medium and long-term socio-environmental and socioeconomic repair programs to be completed. The 42 programs include a range of remediation measures designed to return the river system to the pre-existing conditions and compensatory programs designed to leave a lasting positive legacy.

The Renova Foundation was established to implement the programs in the Framework Agreement. The Foundation is a private, non-profit organisation that receives endowments from Samarco in order to develop and implement the programs. In the event that Samarco does not have sufficient financial resources, the shareholders, BHP and Vale S.A will fulfil the funding requirements of the Agreement.

Constituted with a Board of Governors, an Executive Leadership Team, an Advisory Council and a Fiscal Council, it has full autonomy. An Interfederative Committee is also instituted, functioning as the Foundation's external oversight body which tracks, monitors and supervises the projects executed. The Interfederative Committee, comprising representatives from a range of government agencies, convenes technical experts in themed Technical Chambers, which provide advice and guidance to its own members and to the technical representatives from the Foundation.

The remediation of the Rio Doce Basin is a complex and long-term endeavour and while there are a number of organisations and individuals providing advice to the Foundation, the Renova Board believes there is significant value in establishing a panel of independent experts with the mandate to review the remediation and compensation programs in their entirety – across the social and environmental streams and from long-term and landscape perspective.

For credibility and transparency, the advisory panel must be under the auspices of an internationally recognised organisation, such as the International Union for the Conservation of Nature (IUCN), and it must report publically its findings and recommendations. The Independent Scientific and Technical Advisory Panel (ISTAP) model employed by IUCN in similarly challenging situations (e.g., The Niger Delta Panel, the Western Gray Whale Advisory Panel) has demonstrated a positive contribution to effective environmental outcomes through sound science and collaboration.

### **International Union for the Conservation of Nature (IUCN)**

IUCN is a membership Union uniquely composed of both government and civil society organisations. Member organisations are represented by the IUCN Council – the governing body. Headquartered in Switzerland, IUCN Secretariat comprises around 950 staff in more than 50 countries. IUCN provides public, private and non-governmental organisations with the

knowledge and tools that enable human progress, economic development and nature conservation to take place together.

Created in 1948, IUCN has evolved into the world's largest and most diverse environmental network. It harnesses the experience, resources and reach of its 1,300 Member organisations and the input of some 16,000 experts. IUCN is the global authority on the status of the natural world and the measures needed to safeguard it. Experts are organised into six commissions dedicated to species survival, environmental law, protected areas, social and economic policy, ecosystem management, and education and communication.

The ability to convene diverse stakeholders and provide the latest science, objective recommendations and on-the-ground expertise drives IUCN's mission of informing and empowering conservation efforts worldwide. IUCN provides a neutral forum in which governments, NGOs, scientists, businesses, local communities, indigenous peoples groups, faith-based organisations and others can work together to forge and implement solutions to environmental challenges.

By facilitating these solutions, IUCN provides governments and institutions at all levels with the impetus to achieve universal goals, including on biodiversity, climate change and sustainable development, which IUCN was instrumental in defining. As the only environmental organisation with official United Nations Observer Status, IUCN ensures that nature conservation has a voice at the highest level of international governance.

At the request of business, government and financial institutions, the IUCN has established and coordinated several Independent Scientific and Technical Advisory Panels to help understand, propose recommendations for, and monitor, projects that generate challenging issues and impacts on biodiversity and conservation. These Panels are managed by the IUCN's Business and Biodiversity Programme based in Europe.

## **2. GOAL AND OBJECTIVES**

The Rio Doce ISTAP is an independent advisory body of scientists convened and managed by IUCN. The overall goal of the Panel is to provide the Renova Foundation with objective independent advice on the recovery of the Rio Doce Basin following the Fundão Dam failure on 5 November 2015. The ISTAP has been constituted and will be coordinated by the IUCN, an international organisation with extensive experience in managing similar Panels. Its objectives are to:

- **Provide independent expert scientific advice and guidance to the Renova Foundation**

The ISTAP's deliberations will be independent and free from real or perceived conflicts of interest and the Panel of experts will draw on existing international and national best practice and new knowledge.

- **Provide a landscape-scale perspective**

The ISTAP will challenge the Renova Foundation to develop and implement an integrated, outcomes-based strategy. It will encourage the development and implementation of innovative and long-term solutions to optimise resources and lead to the best possible social and conservation outcomes.

- **Build stakeholder confidence in the Renova Foundation's scientific assessment and management responses**

Transparency and engagement will be central to the operation of the ISTAP. Information will be science-driven and evidence-based and the Panel's reports and recommendations will be publically available. Engagement with interested and affected stakeholders will be integral to the STAP process.

### 3. PRINCIPLES

Based upon learning from other efforts with Panels, IUCN has recognized that to be effective, the ISTAP should operate according to the following four general principles: independence, transparency, accountability and engagement. These principles apply to all IUCN-supported Independent Scientific & Technical Advisory Panels ([Procedures for establishing and managing IUCN-supported Independent Scientific & Technical Advisory Panels](#), 2014).

- **Independence:** The Panel, whose members are selected through an open and transparent recruitment process by IUCN, should be established and operate free from any external influence (whether government, private sector, NGOs, scientists or IUCN). Collectively, the Panel members are free to reach what the Panel considers the most robust and feasible conclusions and recommendations based on the best available science.
- **Transparency:** Working arrangements and conclusions and recommendations of the Panel should be made publically and openly accessible in an unaltered manner.

- **Accountability:** The Panel should have a clear sense of purpose, deliver high-quality outputs in a timely manner and be administered in a way that is consistent with IUCN's policies and procedures.
- **Engagement:** The Panel should consider the interests of all affected parties during its entire lifetime. This includes recruiting Panel members who are willing to understand a diversity of disciplines and perspectives and to implement a clear stakeholder engagement plan as part of the Panel's activities.

#### 4. SCOPE

The intent of the Panel's recommendations is to enhance the design and implementation of the Framework Agreement programs and measures so that they deliver optimal outcomes for the environment and people of the Rio Doce catchment in Minas Gerais, Brazil. This will enable the Renova Foundation to effectively, efficiently and sustainably fulfil its mandate concerning remediation and compensation actions in the Rio Doce watershed. The scope of the Rio Doce Basin ISTAP is outlined below:

- (a) The Rio Doce Basin ISTAP is an advisory rather than a prescriptive body, and its decisions will be in the nature of recommendations rather than prescriptions. It will provide guidance and recommendations it considers necessary, useful and/or advisable for the remediation and compensation of the Rio Doce Basin, both on a proactive basis and in response to specific requests for guidance on relevant issues within its mandate.
- (b) Substantively, the ISTAP will focus on the rehabilitation of the Rio Doce Basin. It will focus on those issues related to biodiversity, ecosystem restoration and the dependency of local communities on natural resources. It provides the opportunity for coordination and cooperation among interested parties, including the Renova Foundation, governments, financial institutions, and civil society.
- (c) Geographically, the focus of the ISTAP is on the 650 river kilometres and associated catchment areas impacted by the Fundão dam failure. Compensatory actions are directed across the basin but remediation activities are undertaken in specific regions:
  - Area 1- 100km between Fundão and Candonga
  - Area 2 - Candonga to the sea
  - Area 3 - River mouth and coast

- (d) To this end, the ISTAP should have sufficient access to data and information from all interested parties and will be free to seek any information necessary and relevant to discharge its duties. Where necessary or useful, the Panel may seek information and input from scientists and researchers in related fields external to the Panel, and establish dialogues with other relevant scientific groups.
- (e) The Panel should be open to input from organizations including NGOs, academic institutions and governments.
- (f) The ISTAP will develop a vision for its work that will be delivered, through its successive annual work plans, reviews and assessments, into proactive, publically available, recommendations and advice to the Renova Foundation and others as appropriate. This and/or other developments may warrant appropriate amendments to these Terms of Reference.

## 5. ROLES AND RESPONSIBILITIES OF IUCN

The role and responsibilities of IUCN are to:

- (a) Act as the impartial convenor of the Panel;
- (b) Consult with Renova Foundation and other key stakeholders in relation to potential candidates for the Panel Chair and Members
- (c) Select and appoint the Panel Chair and Members, in accordance with [IUCN Procedures for Establishing and Managing Independent Scientific and Technical Advisory Panels](#) (2014);
- (d) Establish and maintain the independence of the Panel;
- (e) Provide the conduit for transmitting all information and documentation requests to and from the Panel;
- (f) Provide secretariat support to the Panel, including the management of Budget Funds and negotiation/execution of contracts with Panel Members, as necessary and appropriate for their participation in the Panel;
- (g) Ensure the Panel's work adheres to [IUCN's Publishing Guidelines](#), are approved by the [IUCN Editorial Board](#), and include a peer-review process
- (h) Post all relevant reports and materials used and produced by the Panel on the IUCN website and make them available through other media/channels when and as IUCN, in consultation with the Panel Chair, deems necessary and appropriate;
- (i) Promote the work of the Panel, and in particular its technical reports, through communications with relevant audiences and stakeholders;
- (j) Monitor regularly the Panel's overall performance and compliance with their TOR;
- (k) Engage relevant stakeholders as needed.

## 6. ROLES AND RESPONSIBILITIES OF THE RENOVA FOUNDATION

The role and responsibilities of Renova Foundation are to:

- (a) Enter into a legally binding contract with IUCN for the latter to convene and manage the ISTAP.
- (b) Provide appropriate funding to support the Panel's activities. The budget will ensure there is a minimum threshold that will be provided and a certain timeframe to allow proper Terms of Reference to be developed and experts to be recruited.
- (c) Actively solicit the participation of other organisations and facilitate engagement of the ISTAP with key stakeholders in the recovery process.
- (d) Provide relevant information and documentation to the ISTAP in a timely and well-documented manner to facilitate the efficient functioning of the ISTAP.
- (e) Actively support IUCN in effectively maintaining its credibility as the ISTAP neutral convenor; and
- (f) With respect to the conclusions, advice and recommendations provided by the ISTAP, clearly identify and document specific areas and points (i) where they were/will be accepted and/or implemented or (ii) where they were not/will not be accepted and/or implemented (including a clear explanation).

## 7. ACTIVITIES

The ISTAP (in consultation with the Renova Board) will:

- undertake a scientific and evidence-based holistic review of the Framework Agreement programs to understand how they interconnect and to identify potential gaps and synergies;
- review specific scientific studies and other assessments to ensure they are appropriate in scope and methodology;
- support the development of a practical, robust scientific monitoring and evaluation framework including definition of milestones and outcomes and development of appropriate outcome and impact indicators;
- monitor specific programs, verify results and make improvement recommendations
- provide practical and implementable recommendations to the Renova Foundation, and report findings to the IUCN Secretariat;
- document learnings and knowledge throughout the process so they can be broadly applied in other relevant situations
- Communicate successful models to engage and enrol support of other actors in the broader restoration of the Rio Doce Basin.

The ISTAP will not

- implement in part or in full any remediation or compensation programs prescribed in the Framework Agreement;
- make decisions in relation to any of the Foundation's activities or Framework Agreement programs;
- have a mandate to enforce recommendations, direct the Foundation or initiate any other actions that may place an undue burden on the Renova staff;
- be a source of funding for any programs associated with the remediation of the Rio Doce Basin.

## **8. KEY TASKS FOR THE ISTAP**

The ISTAP will focus on issues that relate to biodiversity, ecosystem restoration and the interdependency between local communities and natural resources. It will cover three key areas:

- Environmental remediation of impacted areas
  - Collate and synthesise the best available scientific opinion to assess the scope and scale of actions required to fulfil terms of the Framework Agreement as they relate to remediation of ecosystems.
  - Validate the approaches and tools selected by the Foundation to remediate impacted areas; and where necessary, highlight gaps and provide recommendations. The panel may provide input into technical challenges that impact the desired outcomes of the Foundation's work.
  - Inform the development of appropriate indicators and review progress reports on efforts to remediate affected areas. Where necessary provide recommendations.
- Environmental compensation and infrastructure
  - Review and propose best practice mechanisms that compensate for environmental impacts in line with the terms of the Framework Agreement
  - Encourage a holistic approach when producing recommendations and strategies for restoration that take in to account livelihoods and their relationship with natural resources
  - Inform the development of appropriate indicators and review progress reports of compensatory actions. Where necessary provide recommendations.
- Human rights, social participation and livelihoods
  - Support the design of an integrated livelihood and infrastructure development by identifying opportunities to explore new economy approaches that are well

understood and embraced by affected communities and stakeholders; incorporate solutions to mitigate climate change risks; and address other long term sustainability challenges. Broadly communicate lessons-learned and successful models that are beneficial for restoration of the watershed as well as sustainable development.

- Review communication and advise on engagement processes to ensure that information is timely, accessible and accurate
- Encourage that a robust participatory approach is incorporated in the design and execution of programs and people's rights have been respected and promoted.

## **9. OPERATIONS OF THE ISTAP**

### **9.1 Composition and Selection**

It is envisaged that the Panel will consist of approximately 7 members, of whom approximately half will likely be based in Brazil (some local to Minas Gerais). The aim is to make the panel gender balanced, however the overall goal will be to achieve the ideal mix of technical expertise and skills.

The technical and scientific expertise required on the Panel will be determined by IUCN in consultation with the Renova Foundation.

Objectivity and transparency in the selection process will be ensured by setting selection criteria, publically posting open positions, and constituting a candidate evaluation committee. To this end IUCN will also consult with Renova Foundation and interested parties (see Section 12) on nominations to be considered but the eventual decision will remain with IUCN as the convenor.

The Panel will include the best available scientists in their respective fields with ample experience and ability to bridge scientific, technological and policy issues related to terrestrial and aquatic restoration, community livelihoods, scientific research and conservation. Panel members will be independent from, and free of any conflict of interest (whether actual, potential or reasonably perceived) with Samarco, BHP, Vale, and the Renova Foundation. The actual number of scientists will depend on their availability and on the mix of different fields of expertise they individually bring to the Panel.

Below is an initial list of experts/expertise required for the panel:

- Freshwater/terrestrial ecologist
- Freshwater toxicologist
- Freshwater ecosystem remediation expert
- Landscape forestry restoration expert

- Community sustainable livelihoods specialist (e.g., fishing, agriculture, sand mining)
- Community specialist
- Sewage & water treatment expert
- Other potential expertise areas:
  - Health
  - Marine
  - Impact assessment – how to measure impacts, cumulative impacts. M&E
  - New economy – climate change, SDGs, agribusiness sector, low carbon agriculture.

The Panel Chair may cover an area or areas of thematic expertise as well as serve as the Chair of the Panel.

## **9.2 Work plans, Meetings, Missions, Reports**

- (a) For each calendar year, and no later than two months before of the end of the preceding year, the ISTAP, in consultation with IUCN and the Renova Foundation, will establish an annual work plan and proposed budget, including (but not limited to) the reviews it will undertake, the information it will require, the meetings it will hold, and the workshops and other events it may convene. The ISTAP may request activities (commissioning studies, site visits, some stakeholder consultation) be carried out by the Renova Foundation. The annual budget will need to be presented to Renova Foundation for approval.

Subsequently, and in consultation with the ISTAP Chair, IUCN will establish a more detailed plan for each of the key assignments.

- (b) The ISTAP will meet face-to-face at least twice per calendar year. An annual meeting will be scheduled to ensure that a full analysis and review of results of the previous year's operations and restoration measures occur sufficiently in advance to influence the Renova Foundation's planning, procedures and activities for the ensuing work season. Meetings will be held with participation of the Foundation.
- (c) The Foundation will nominate a contact for the ISTAP who will have single point accountability for facilitating access to relevant information; ensuring personnel are available for consultation by the ISTAP at mutually convenient times, and for arranging dissemination of ISTAP outcomes to internal and relevant external stakeholders and providing relevant feedback and input from the Foundation to the ISTAP.
- (d) The Chair of the ISTAP has single point accountability for defining annual work plans for the Panel, the proceedings of the meetings and the ISTAP's reports. This includes being responsible for its final content in consultation with panel members as well as adherence to

IUCN's publication guidelines and peer review. IUCN and Renova Foundation will provide contracting and logistics support as needed.

It is expected that adoption of any report by the ISTAP will be by consensus among the Panel members. However, if full consensus is not achieved, any of the ISTAP members will have the right and opportunity to provide a written minority view that will be included in the relevant report as an authored annex.

The Foundation will be asked to review and comment on all ISTAP reports before they are finalized, however, the Panel chair will retain editorial control on all documents produced by the Panel. These documents will be subject to [IUCN's Publishing Guidelines](#), will need to be approved by the [IUCN Editorial Board](#), and include a peer-review process.

- (e) The timelines for ISTAP reports and Renova Foundation responses will be agreed at each meeting, following consultations conducted by the Chair with IUCN and the Director President of the Renova Foundation. IUCN will dispatch the agenda and the background documents no later than two weeks in advance of a meeting.
- (f) The Chair of the ISTAP may, with the advance written approval of IUCN and the Foundation, arrange for assignments or commission field visits and missions, either by one or more Panel members or by other independent experts, to analyze or assess a particular issue, event or outcome of direct relevance to the work of the ISTAP. The Foundation may also identify and support potential areas for specific assignments, visits etc., but the decision to move forward with these potential assignments resides with the Panel Chair. All such assignments, visits or missions will produce reports available to the members of ISTAP, IUCN and the Foundation. These assignments and commissions should be duly incorporated in the Annual plan and budget.
- (g) The advisory process of ISTAP is guided by practices characterizing the delivery of objective, credible and high-quality scientific and technical advice. These practices include the identification of experts for the Panels' assignments (when and where needed) representing a balance of views and disciplines, and peer review of working papers and new scientific outputs when appropriate, according to the discretion of the ISTAP Chair. In fulfilling its terms of reference, ISTAP shall draw on IUCN networks with the wider scientific community.

### 9.3 Data and Information

Cooperation is required by those collecting and generating information and data. Data represents the product of a significant investment of both money and time, therefore, appropriate measures aimed at safeguarding the legitimate interests of persons holding rights thereto shall be adopted and respected by all parties concerned.

The information and data exchange between IUCN and Renova Foundation will take place according to the following considerations:

- The intellectual property rights of those involved in the collection of data must be respected (e.g. the right to first publication, ownership as well as confidentiality concerns, whether of commercial or other nature);
- The right of first publication is a generally accepted scientific norm that will be respected and complied with;
- Recommendations should be based on a full scientific review of both data quality and analysis that can be independently verified;
- Whilst the results of analyses of the data and broad summaries of the data may be included in ISTAP reports if required to explain the rationale for recommendations, the raw data reviewed by panel members will remain confidential and the property of the rightful data collectors or providers;
- When use of proprietary data is involved in any publication or report, the rightful data collectors or providers, including Renova Foundation, will be consulted and requested to approve such use; and
- The information and level of resolution of the data to be made available to the ISTAP will be determined by the ISTAP on the basis of the analysis for which the data are required and must be reasonable, objective, and adequate to the purpose and delivered in a mutually agreed-upon and timely fashion.

Each ISTAP member will be required to sign an individual non-disclosure agreement (NDA) pursuant to which he/she will have an obligation, *inter alia*, not to disclose outside the ISTAP information designated as confidential.

### 9.4 Recommendations – Strategic and operational advice

Depending on their scope and as a mechanism to focus its advice, all recommendations are divided into Strategic Advice and Operational Advice.

**Strategic Advice** addresses contemporary but open-ended or systemic issues related to the conservation and recovery of the Rio Doce Basin that call for the involvement and joint efforts of a wide range of stakeholders including national governments, companies and civil society.

Strategic Advice should be addressed to the competent national, state and regional agencies and organisations with responsibilities for the conservation and recovery of the Rio Doce Basin. It would include among other things:

- (a) Advice on needs for further scientific knowledge, policies and common operational implications of industrial operations related to the conservation of Rio Doce Basin
- (b) Advice containing specific scientific aspects of river ecology, the identification of negative impacts, its potential effects and on protective measures to minimize them; including level of integration and urgency of implementation; and
- (c) Advice on further research plans and programs by identifying targeted or integrated studies, which would improve the knowledge on the status and conservation of the Rio Doce Basin

**Operational Advice** addresses specific, clearly individualized and time-bound targets, e.g. current project, survey, installation, construction, program, research, and should be addressed to the body or bodies which undertake such activities. It would include:

- (a) Advice on protective measures and mitigation and offset for ongoing and planned future industrial activities;
- (b) Advice on the nature and scope of the monitoring programs specified for ongoing and planned future industrial activities; and
- (c) Advice on the improvement of ongoing and future scientific programs and individual research projects to maximize contributions to understanding conservation needs.

## **9.5. Funding**

The operation of the ISTAP will be funded by the Renova Foundation as per a contractual arrangement between the Foundation and the IUCN.

Additional research or activities may be considered of benefit during the operation of the ISTAP. Funding for these activities may come from the Foundation or from other organisations as appropriate. The development of the annual workplan and budget is an opportune (but not exclusive) time to request, and budget for, additional research and activities.

## **10. COMMUNICATIONS AND TRANSPARENCY**

(a) ISTAP members will disclose any conflict of interest (whether actual, potential or reasonably perceived) from recent (last 12 months) or anticipated (next 12 months) relationships with the Foundation.

(b) Information and documentation related to the ISTAP, including these Terms of Reference, work-plans, meeting schedules and agendas, reports and responses will be made publicly available on the IUCN website.

(c) IUCN has developed a communications strategy which will be implemented and updated as necessary. The aim of the strategy is to ensure that interested parties have access to information to enable independent assessment of progress and to have opportunities to interact with the ISTAP.

(d) All documents submitted to the ISTAP will normally be made publicly available, except for information that is designated confidential. Whether information is confidential or not will be determined by IUCN in consultation with the entity or individual providing the information. Confidentiality will be an exception rather than the rule, and therefore as much information as possible will be made available to the public.

(e) IUCN will act as intermediary between the ISTAP and interested parties in order to:

- i. ensure all interested parties have fair and equal access to information about the ISTAP process and ISTAP Reports,
- ii. strengthen the independence of the ISTAP,
- iii. enable documentation of information flows to the ISTAP, and
- iv. manage requests for information in connection with the ISTAP process and work.

(f) The provisions of paragraph 10(e) above apply to the formal activities of the ISTAP that IUCN will convene, and does not preclude interactions between the ISTAP members and interested party scientists as part of the activities of associated task forces.

(g) The Chair of the ISTAP will have exclusive authority to speak for the ISTAP on substantive scientific aspects and findings of its work, and will coordinate with IUCN on requests made to him/her by media or the ISTAP members, or other sources, for information, statements and interviews. All queries related to the process of ISTAP will be addressed by IUCN which, likewise, will coordinate with the Chair as necessary. The Chair may delegate his/her authority for responding to any of the substantive scientific questions or findings addressed to him/her to one or more of the members of the ISTAP. Where individual ISTAP members are approached directly, they shall consult and follow the advice of the ISTAP Chair.

## **11. PERFORMANCE ASSESSMENT**

Regular performance assessment is essential to ensure that the collaborative effort required by these TOR from all the parties concerned succeeds and contributes to the achievement of the goal and objectives of this partnership. Consequently, assessments of the performance of the ISTAP (including individual panel members) as an advisory body, of IUCN as a convenor, and of the Renova Foundation in terms of their implementation of the advice from the, will be conducted as follows:

(a) Self-assessment will be a recurring item on the agenda of the ISTAP. In each of its meetings, it will (i) evaluate its own performance and the extent to which, in its opinion and on the basis of available information, the Renova Foundation are implementing its advice and (ii) provide any recommendations to IUCN for changes needed in the ISTAP process.

(b) IUCN will, in adherence to its [Monitoring and Evaluation Policy](#), and in consultation with the ISTAP Chair and the Renova Foundation, appoint an independent agency to perform a mid-term and final evaluation of (i) the performance against these TOR (ii) the effectiveness with which IUCN, ISTAP, and the Renova Foundation have played their respective roles and (iii) the impact the ISTAP has played in enhancing environmental outcomes and public confidence. The Renova Foundation will provide the necessary funds to carry out these evaluations as part of the Annual Budget process. The evaluation will be conducted against a set of indicators that will be developed by IUCN and agreed with the Renova Foundation and ISTAP. The independent agency will make recommendations on how the performance might be improved and the recommendations will be made public.

(c) IUCN will, in consultation with ISTAP and the Renova Foundation, determine to what extent the recommendations arising from 11 (a) and 11 (b) (above) are to be adopted and implemented. IUCN will have the final decision regarding adoption and implementation of such recommendations. IUCN will clearly identify and document specific recommendations (i) where they were/will be accepted and/or implemented or (ii) where they were not/will not be accepted and/or implemented (including a clear explanation therefore). IUCN will ensure that these TOR are amended, if and as necessary, to reflect the accepted recommendations.

## **12. PARTICIPATION OF INTERESTED PARTIES**

### **12.1. Advisory Council**

The Foundation's Advisory Council (which incorporates input from affected communities) will have the opportunity to:

- a) Nominate candidates for membership in the ISTAP;
- b) Provide IUCN with information on issues within the scope of these TOR and important for the ISTAP to consider in carrying out its mandate. IUCN will relay the information it receives to the ISTAP Chair, so that it may be placed on the agenda for the successive ISTAP meetings;

## **12.2. InterFederative Committee**

The InterFederative Committee (CIF) will have the opportunity to:

- a) Nominate candidates for membership in the ISTAP;
- b) Provide IUCN with information on issues within the scope of these TOR and important for the ISTAP to consider in carrying out its mandate. IUCN will relay the information it receives to the ISTAP Chair, so that it may be placed on the agenda for the successive ISTAP meetings;

## **12.3 Civil Society**

Civil society will have the opportunity to:

- a) Nominate candidates for membership in the ISTAP;
- b) Provide IUCN with information on issues within the scope of these TOR and important for the ISTAP to consider in carrying out its mandate. IUCN will relay the information it receives to the ISTAP Chair, so that it may be placed on the agenda for the successive ISTAP meetings;

## **12.4 Academic Institutions**

Academic Institutions will have the opportunity to:

- a) Nominate candidates for membership in the ISTAP;
- b) Provide IUCN with information on issues within the scope of these TOR and important for the ISTAP to consider in carrying out its mandate. IUCN will relay the information it receives to the ISTAP Chair, so that it may be placed on the agenda for the successive ISTAP meetings;

## **12.5 Coordinator of the Prosecutor's Office and Curator of Foundations, Public Ministry of Minas Gerais**

- a) Nominate candidates for membership in the ISTAP;
- b) Provide IUCN with information on issues within the scope of these TOR and important for the ISTAP to consider in carrying out its mandate. IUCN will relay the information it receives to the ISTAP Chair, so that it may be placed on the agenda for the successive ISTAP meetings;

### **13. TERM**

The ISTAP is to be established for an initial period of five years. This term may be extended for further periods as necessary and useful, subject to agreement between IUCN and the Renova Foundation.