



Analysis of the Rio Doce Panel's Impact 2017 - 2022

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Part I – Introduction

The Rio Doce Panel (RDP), a multidisciplinary Independent Scientific and Technical

iv) Finally, the

Graph 3 – RDP Citations per Year and Document

Secondly, an analysis of the context in which TR01 was mentioned revealed that most of the citations used the Thematic Report to

Table 1 – Download Metrics for Portuguese and English

PUBLICATION	PT	ENG	MONTHS
TR01	4297	4409	50
TR02	906	1059	30
TR03	572	778	21
TR04	367	479	17
TR05	134	106	2
Total	6276	6831	50

Graphs 4 and 5 show the variation in the number of downloads through the RDP's lifespan for English and Portuguese versions of ea

Graphs 4 and 5 show interesting knowledge uptake patterns. First, it is possible to observe boom-and-bust patterns for every document download number, a trend more observable in Portuguese downloads. When cross-referencing this pattern with past dates of events that IUCN held, it is possible to observe an increase in the number of downloads in months with webinars or related events. For example, TR01's best months in 2022 were May and June, which preceded a webinar on June 20. Another recurrent pattern in the data is that number of downloads increased in October and November, the months that mark the anniversary of the Mariana disaster. Data in Table 2 points out a 36% average increase in TR01 downloads in English and 27% in Portuguese when comparing the average numbers for November and October with the yearly average.

Table 2 – TR01's download increase by year – Average increase in downloads for October and November in comparison with average yearly downloads (without October and November)

Year	English	Portuguese
2019	12.3%	26.5%
2020	0.2%	28.3%
2021	125.9%	-5.6%

Graph 7 – Comparison of Thematic Report downloads during its first semester – Portuguese

III. RF's feedback

Since the first Thematic Report, IUCN and the RF established a feedback system in which the RF explained how each RDP's recommendations would be implemented.

mentioned that RF's programs became increasingly subject to judicial action, focusing solely on the TTAC, with few institutional activities beyond the binding document.

One example illustrating the hypothesis that RF's attitude towards specific topics changed over time is the acceptance of climate-change-related recommendations. During the end-of-project evaluation, RDP members pointed out that RF was not interested in the thematic report focusing on climate change, as the RF's perception was that the theme was not highly relevant to the reparation process. This was confirmed by the fact that three out of the four recommendations related to climate change issued in

format was more relevant for their work than the previous RDP recommendations", 94% of respondents claimed this statement to be accurate, suggesting that RF staff well received the change of methodology.

b. Thematic

Early in the project, IUCN decided to group the RDP recommendations into six groups to facilitate communication efforts and help MEL officers keep track of their implementation. Table 4 describes how the 33 recommendations (excluding TR05's) were split between six different groups and their definitions.

The use of the RDP recommendations was monitored with the help of N-Vivo, a software that stores documents (academic papers, articles, meeting minutes, etc.) and allows for organising and analysing large amounts of qualitative data. IUCN MEL officers clustered the recommendations into the six above-mentioned groups, and kept track, with over 1100 documents, of what was happening and what was being implemented in the Rio Doce reparation context. Thanks to this work, it was possible to find several instances of stakeholders that acted upon the recommendation of the panel. The N-Vivo work and its results are presented in-depth in another paper, called "Using secondary data to assess knowledge uptake and influence of the Rio Doce Panel: Findings and key lessons learned from using the N-Vivo software."

Table 4 – Recommendation Groups and Descriptions

Groups & Number of Recommendations	Description	Recommendations
Environmental and Human Health (9 Recommendations)	Recommendations related to qualifying and improving local ecosystems fall into three different lines of action: i) Continuous effort to monitor the environmental health and the quality of ecosystems; ii) Lake Juparanã-related recommendations; iii) Recommendations focusing on Nature-based solutions;	TR02R03 TR03R02, TR03R05 IP02R02 IP03R01, IP03R02, IP03R03 IP05R01, IP05R03
Governance (11)	An overarching category with recommendations that promote governance models between stakeholders involved in the planning and implementation chains. This involves creating common capacities (e.g., sanitary systems), promoting citizen engagement, creating common frameworks between different stakeholders (e.g., Rio Doce Climate Action Plan), establishing public policies, and planning future actions.	TR01R05 TR02R01, TR02R02, TR02R04 TR03R01, TR03R03, TR03R04

information available through a more

Another finding from the end-of-project evaluation and supported by further interviews and IUCN Secretariat testimonies was that RF's acceptance rate started to drop once RDP started to work on themes that differed from RF preferred ones. Issue Paper 03, focusing on the Juparanã Lake was, for example,

Graph 13 – Recorded Influence Log Entries Overtime (and Renova-related entries)

TR02 primarily influenced representatives from Vale and members of the Minas Gerais public spheres. Vale officials used the document as a source for Brumadinho's disaster reparation efforts, while the Minas Gerais' state government officials used the document to create climate action plans.

The source-to-sea Thematic Report (TR03) had a strong impact on the Minas Gerais state government's technical members. Government executives, for example, reported using the document as a source for different approaches for the watershed amidst the renegotiation context. They also said using TR04's insights on the reparation process governance. TR03's innovative transpositions of a concept unfamiliar to the Brazilian context also resonated with universities. Other examples of how the work of the RDP influenced different audiences include:

Fishing -

When looking at the specific influence that thematic report and issue paper had on RF, we can observe that out of the 28 influence entries recorded for RF, 55% relate to IPs, and 45% to TR, with 32% for TR01 only. This difference might be explained by the fact that Issue Papers were shorter, took less time to prepare and had more direct recommendations, which were not subject to peer review for publication. A closer look into Issue Paper's influence log entries also infers that RF took more active measures to implement IP's recommendations than those from Thematic Reports.

Overall, the Impact Log analysis provides a good panorama of the influence of RDP products on its target audiences over time. Instances of influence captured in the log suggest that IPs had a more significant impact on RF than TRs. Aside from the strained relationship and institutional changes within the RF, one possible explanation is the difference in production timing between TRs and IPs (IPs were produced before most of TR) and IP's recommendations were perceived as more straightforward to implement than TR's. On the other hand, instances of influences showed that RDP increased its effect on other stakeholders, such a

Part II – Conclusion

This report analysed data collected against four different indicators used throughout the RDP's lifespan to answer the following questions: **“What impact had the RDP on how its audience undertakes its core activities, and how lasting are these changes likely to be?”** Although the data from Citation Metrics, Download Numbers, RF's Acceptance Rate, and impact log did not converge into a single explanation, they helped portray a panorama of the RDP's impact on the reparation efforts. Data analysed for this report tends to show that the RDP had a high impact on RF's action until 2020. The high-level acceptance of RDP's early reports and recommendations, and some of the actions taken by RF, such as the creation of the Impact Curatorship, are signs of a good institutional relationship and of the RDP's influence.

It is most likely that some of the decisions taken by RF or other actors influenced by the work of the RDP, such as CBH's decision to update the Integrated Plan for Water Resources, will have long-lasting effects on the restoration of the Rio Doce basin. However, the impact of these decisions and the degree of their implementation should continue to be monitored and documented over time.

Although the exact milestone is uncertain, all the data analysed suggest that the RDP's influence on RF started to decrease in 2021, while its influence on other actors increased almost similarly. Three factors might explain this trend:

Timing – This hypothesis links the dwindling RDP's impact rates on RF to timing issues.

an increase in citations in the coming years when more papers using TR03 and TR04 as a source will be published. Similarly, increased interest in a particular theme, such as climate change, could lead to additional citations.

Overall, download number and citation metrics show two opposite trends. As time passes, public interest in the Mariana disaster wanes, and the RDP's download metrics are affected, leading to a decrease in RDP's outreach. This downward trend is, however, restricted to the general audience as the increasing number of citations in scientific papers suggests a broader use of the RDP's work by the academic world.

Institutional Change and Judicialization – 2019 was a year of institutional turmoil for RF's leadership. Based on a series of interviews, the end of project evaluation pointed out that RF became increasingly TTAC-oriented over the years because of the judicialisation of the reparation programs and had less programmatic autonomy to guide itself outside the binding legal document. This period of institutional turmoil culminated with the first president stepping down from his leadership position in November 2019 and being replaced by the current president of the RF Foundation. The COVID-19 pandemic soon followed, making contact between RF and IUCN more complex and possibly affecting staff turnaround in RF.

Themes – The last explanation is that themes chosen by the RDP started to differ from the ones preferred by RF. After the publication of IP03, which focused on the contentious issue of the Juparanã Lake, all the reports and papers (apart from Issue Paper 4) produced by the RDP had a low acceptance rate of their recommendations.

An interview with a former RF staff member suggested that IP03 was initially not well received or understood by the Foundation. Similarly, the RF was not keen to receive an entire thematic report focusing on climate change, which the Foundation believed would not affect all of its programs. While there was no evidence of the same issues occurring with TR03 and TR04, its rather innovative content that was thought outside the TTAC might have been perceived as contentious by RF.