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# TECHNICAL REPORT

Participation of REDLaTIF in "The  
SpaceWeek Nordeste 2023"



# SPACE WEEK NORDESTE 2023

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## Background

The last REDLaTIF meeting was conducted remotely in April 2021 due to the COVID-19 pandemic. In late 2022, the possibility of holding an in-person REDLaTIF meeting during "The SpaceWeek 2023" event in Fortaleza, Brazil, was discussed. However, due to high travel costs, the proposal was declined. In March 2023, Wilfrid Schroeder communicated the initiative by Garik Gutman and Krishna Vadrevu to organize a land cover session at "The SpaceWeek 2023" and proposed a parallel REDLaTIF meeting. Gerardo López, with Armando Montellanos' approval (current REDLaTIF Coordinator), initiated consultation among network members. A remote meeting was held to assess pros and cons, resulting in further personalized emails to solicit opinions.

Of the 19 possible participants, 13 responded, with 9 confirming in-person attendance. Ultimately, due to logistical challenges and new responsibilities, six members participated, supported by START International. While Wilfrid Schroeder and Krishna Vadrevu couldn't attend, their pre-event efforts were integral.

## Participants



Photograph 1. REDLATIF members participating, Garik Gutman and Chris Justice.

- Gerardo López Saldaña – Mexico/England
- Alexander Ariza – Colombia/Germany
- Garik Gutman – NASA – United States
- Jesús Anaya – Colombia
- Chris Justice – University of Maryland – United States
- María Isabel Cruz López – Mexico
- Nicolás Alejandro Mari – Argentina
- Fabiano Morelli - Brazil

## Summary of Activities:

RED LATINOAMERICANA DE TELEDETECCIÓN E INCENDIOS FORESTALES – REDLATIF 2023

Within "The SpaceWeek Nordeste 2023," we engaged in three primary activities:  
(See Annex 1):

### **1. Session 7: Land Cover, Land Cover Change, and Fires:**

This session featured 12 technical presentations and two keynote talks. Discussions revolved around vegetation dynamics, land cover, and forest fires, focusing on South America and the Amazon. Six of the presentations were delivered by REDLaTIF members. Topics encompassed Earth Observation data applications and challenges, fostering valuable exchanges (Photograph 2). Technical presentations will be available at the GOFC-GOLD web page soon.



Photograph 2. Exhibition by Chris Justice

### **2. REDLaTIF Meeting:**

The meeting of the Latin American Network for Remote Sensing and Forest Fire Detection (REDLaTIF) was convened under the joint efforts of Chris Justice and Garik Gutman (as depicted in Photograph 3). During this pivotal gathering, substantial strides were recognized in the utilization of Earth Observation data for forest fire analysis. Additionally, fruitful collaborations aimed at enhancing capacity-building within the Latin American context were spotlighted. Notably, the event spotlighted the establishment of two courses in partnership with the "Mario

Gulich" Institute of Advanced Space Studies under the National Space Commission of Argentina. The collaborative endeavors also extended to a productive exchange between Mexico and Costa Rica.

A key revelation that emerged from the discussions underscored the significance of updating land cover cartography within meteorological forecasting and climate change models. Of particular interest was Garik Gutman's keen focus on harnessing cartographic insights. This recognition of the pivotal role of accurate land cover data in shaping meteorological and climatic predictions reaffirmed the crucial intersection between Earth Observation data and real-world applications. NASA director Bill Nelson visited the region and collaboration increase is expected. RedLaTIF mission is also to bridge the gap between Space Agencies and final users.



Photograph 3. REDLATIF meeting

### 3. Capacity Development Session:

On the final day of the event, a highly anticipated and impactful course took center stage (as depicted in Photograph 5), titled "Satellite Remote Sensing of Fires – Priorities in South American Countries" (as

shown in Photograph 5). The primary aim of this course was to initiate participants into the realm of satellite-based fire analysis. It achieved this by providing an in-depth exploration of existing monitoring systems, which hold immense potential for addressing and managing forest fires. Delivered with expertise and fervor, the course was jointly curated and presented by six dedicated members of REDLaTIF. For further insight into the course's comprehensive content and structure, please refer to Annex 2 for the detailed agenda. This course not only enriched participants with valuable insights but also exemplified the collaborative spirit and knowledge-sharing ethos that are hallmarks of REDLaTIF's endeavors.



Photograph 4. Teamwork to develop the course



Photo 5: Training course audience.

## Achieved Outcomes:

RED LATINOAMERICANA DE TELEDETECCIÓN E INCENDIOS FORESTALES – REDLATIF 2023

Key outcomes emerged from the event that have significant implications for the future endeavors of REDLaTIF:

**1. Fostering Collaborative Ventures:** The event proved instrumental in identifying potential collaborators for product exchange and joint projects. This aspect holds great promise in enhancing the synergy among REDLaTIF members and the broader geospatial community.

**2. Expanding Technical Expertise:** The gathering provided an invaluable opportunity to delve into a diverse range of methods and tools available for Earth Observation data analysis. Participants gained insights into cutting-edge techniques, enriching their skill set and paving the way for more robust research and applications.

**3. Exploring Cartographic Frontiers:** The event sparked discussions on the prospect of accessing written materials dedicated to cartographic representation tools. This opens the door to acquiring specialized knowledge and insights that can contribute to refining the quality and effectiveness of geospatial visualizations.

**4. Showcasing Collaborative Aptitude:** The collaborative spirit and seamless teamwork of REDLaTIF members came to the forefront during the meticulous planning and execution of the comprehensive course. This collective effort demonstrated the network's cohesive and dynamic approach to knowledge dissemination and capacity building.

These outcomes underline the invaluable role of events like *"The Spaceweek Nordeste 2023"* in nurturing partnerships, enriching technical expertise, and fostering a sense of unity within the REDLaTIF community. The shared commitment to advancing geospatial science and addressing real-world challenges is further reinforced through these accomplishments.

## Ideas for REDLaTIF Development

**1. Enrich the Educational Spectrum:** Consider organizing the third iteration of the course in collaboration with the Instituto Gulich within the current year. This would not only build on the success of previous editions but also provide an opportunity to incorporate the latest advancements in the field, further solidifying REDLaTIF's position as a hub for cutting-edge geospatial knowledge.

**2. Strengthen Regional Collaboration:** Explore the possibility of extending the course offering to the Sociedad Latinoamericana en Percepción Remota y Sistemas de Información Espacial (SELPER) in Mexico. Given the ongoing development of the "Training Course-Remote Sensing applications to floods, droughts, fires, and landslides," this presents an excellent opportunity for cross-network collaboration, fostering shared learning experiences across the regions.

**3. Expertise Enrichment through Specialized Contributions:** In order to augment the course content, consider inviting distinguished experts such as David Roy, Louis Giglio, Iván Csiszar, and Wilfrid Schroeder to share their insights through special presentations. Their expertise in the field of fire-related topics could provide participants with invaluable perspectives and enhance the course's overall impact.

**4. Foster Publication Initiatives:** If there is an intention to continue REDLaTIF's publication efforts, it's advisable to explore avenues for support from individuals like Krishna. Their valuable insights and connections can contribute to elevating the quality and reach of any published work, ensuring that REDLaTIF's contributions are disseminated effectively.

**5. Wider Participation:** Expand the reach of REDLaTIF by actively encouraging participation from additional individuals representing participating countries. Broadening the network's membership base can facilitate greater knowledge exchange and diversity of perspectives, ultimately strengthening the network's impact on regional geospatial research and applications.

**6. Ensuring Sustainable Leadership:** To ensure the continuity and longevity of REDLaTIF, it's prudent to initiate plans for preparing a pool of individuals who can take up leadership roles in the future. This step would guarantee a seamless transition of responsibilities and maintain the network's momentum for years to come.



**7. Fire IT Canada:** Call upon participants to join the Fire IT meeting in Canada later this year.

**8. Milestone Gathering in 2025:** With 2025 marking the 20th anniversary of the 2005 meeting, consider holding the REDLaTIF 2025 meeting in Mexico, in collaboration with CONABIO. This milestone event would not only commemorate the network's journey but also provide an ideal platform to envision the trajectory for the next quarter-century of REDLaTIF's endeavors.

**9. Hold the RedLaTIF 2024:** Propose holding a meeting in Medellin, Colombia, with the support of the University of Medellin and the Agustin Codazzi Geographic Institute (IGAC).

## Conclusion

In conclusion, REDLaTIF's dynamic engagement in the "Spaceweek Nordeste 2023" event underscores the pivotal role played by regional collaboration and the sharing of knowledge within the realm of geospatial sciences, particularly in the domains of land cover, land use change, and forest fire management. The use of GeoPortals and web based synthesis tools are evident throughout the presentations.

These collaborative endeavors and the exchange of experiences significantly contribute to fostering coordination, disseminating information, and enhancing capacities. REDLaTIF effectively aligns with the broader objectives of GOFC/GOLD while effectively addressing the specific challenges associated with forest fires across Latin America.

While these efforts represent significant strides toward achieving the network's objectives, a notable concern emerges regarding the absence of adequate funding or sustainable resources to support future research projects and capacity-building initiatives. This highlights the urgent need for securing financial backing and resource channels to ensure the continuity and success of REDLaTIF's endeavors in the years ahead.

The primary goal of REDLaTIF continues to revolve around facilitating heightened collaboration among Latin American stakeholders engaged in projects related to forest fire monitoring and management. By harnessing the capabilities of remote sensing and geospatial technologies, REDLaTIF is committed to confronting the pressing issue of forest fires head-on. Through its active participation in significant events like the "Spaceweek Nordeste 2023," REDLaTIF reiterates its unwavering dedication to combating forest fires and promoting sustainable practices. Ongoing collaboration is expected to increase after the visit of Bill Nelson, NASA director, to the region.