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***NOTE: MAXIMUM LENGTH OF THE TEXT REPORT IS 6 (SIX) PAGES (starting from question 1)** *Reports exceeding this length will be returned to the author(s) with the request of reducing the text to the above standard.*

List of Meetings (Section 3.2); Publications (Section 3.6); Financial Statement (Section 8) should be added as an Annex (See form IV-meeting report and form III-financial statement).

The scientific information in this report will further be used for publications by UNESCO *(please feel free to attach any additional information you may consider relevant to the assessment of the project).*

IGCP project short title: OLLIN-Fault2SHA in Latin America (IGCP 669)

Duration: *Project was approved in 2020; 2025 is the forth year we receive financial support*

Please tick this box if the report is for a Project on Extended Term (OET): ☐

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Date of submission of report: 06/01/2026

Signature of project leader(s):

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Guidelines for Annual Report

Please use the following headlines to report the present status and scientific achievements of your project (write N/A where not applicable) and explain abbreviations used in the report.

1. Website address(es) related to the project

https://www.ollinproyecto.com/

2. Summary of major past achievements of the project (maximum 250 words excluding 2025 achievements). *Meetings are not considered as scientific achievements; they should be listed under heading 3.2 and as an annex file*.

After a first phase focused on the consolidation of the network, with sounded connections between research groups based in Latin America (mainly) and Europe, we have focused on training activities during the last three years, during which the network has reached 150 members. Previous to 2025, two training schools were organized, having hybrid format, on July 2023 in Bogota (Colombia) and November 2024 in Mendoza (Argentina). The lessons and seminars of the last one are available online (https://www.youtube.com/playlist?list=PLVjRFDAwvIzy-0wva47wJAaTM_zHw6n1C). During these years, we have promoted and facilitated the participation of young geologists (including undergraduate and graduate levels) in different meetings, as well as sponsored the scientific stages (1 to 2 months) of 3 ECR from Perú and Mexio/Colombia in Europe. Thanks to these meetings, a number of students have accessed to PhD grants in neighbouring countries, focused on PSHA and active tectonics near large cities in Latin America. Moreover, the links between the proposers and local coordinators have allowed to get additional support to realize professional assessment: this is reflected in the collaboration with IKIAM university in Ecuador (2023), the agreement between Spain and Colombia (IGME-SGC, active since 2020), an Mexican-French projects focused in the research of the Mexican Trans-mexican volcanic Belt (2023-2024).

3. Achievements of the project for 2025 only

3.1. General scientific and societal achievements (maximum 500 words)

(Meetings are not considered as scientific achievements, they should be listed under heading 3.2.)

- *The main achievement of the project this year was the organization of the **third training school**, which this year was focused on Dating techniques applied to Fault2sha. It counted with 8 international lecturers from Colombia, France, Equador, Venezuela and Spain, and was hold in IKIAM university in Tena, Ecuador (8-12 september 2025). The training school was co-sponsored with the support of IKIAM university, IDR-France and an **INQUA grant** (7000 USD) obtained by two OLLIN members (Lea Pousse and Oswaldo Guzmán). The program included three days of teorical-practical lessons, mainly focused on Dating techniques (14C, luminiscensce, cosmogenic dating and chronological models) but also on basic topics of active tectonics (morphotectonics, paleoseismology) and seismic hazard. It included one practical computer lesson to train researchers in some basic fault2SHA tools) and a seminar on Active Tectonics of Ecuador. It counted 44 attendants on-site (most of them from Ecuador, 6 of them from Chile, Perú, Venezula and Colombia) and near 30 attendants online (check the program of the course in the annexes). As it can be seen in the participant list (attached), the gender balance was not reached but over the standards for earth science (17 women and 27 men). It was achieved among the instructors (4 women and 4 men). All participants were coming from countries with less scientific investment and lacking economic supports for career development.*

- *Two field trips were organized to cover practical aspects of the training school. Description of the fieldtrips is provided in the Meeting Form.*

- *Thanks to the collaboration within the IGCP 669 network, we obtained funding by the Spanish Geological Survey (IGME-CSIC) Proyecto RESISTE- COOPB24084 (30,000 euros and two years long: 2025 and 2026). In the frame of this project, a two days Fault2SHA seminar was organized in Madrid (12-14 may 2025) as the First Training Seminar on faults to PSHA. This counted with*

30 participants (almost half of them women), mainly from Spanish universities and institutions but also involving two ECR from Instituto Geológico Minero y Metalúrgico (Perú) and IANIGLA and Univ. of Mendoza (Argentina). These two researchers enjoy 2 months research stay at IGME-Madrid under the supervision of one of the IGCP 669 project, Julian García Mayordomo, focused on seismic hazard models in Cusco and Mendoza. More information: here.

- *Rodrigo León (Univ. of Andes, Colombia) received support to attend the 7th Faul2SHA meeting that will take in place in Vienna (6-8 July 2026). https://fault2sha.net/7th-workshop/*

- *Other achievement of the project was to facilitated the participation of 2 early career researchers from Ecuador and Perú to attend two national meetings in Argentina:*

  -Fernanda Guarderas (ECR from Univ. Loja, Ecuador) received support to attend the course "From Active Fault Identification to Seismic Hazard Characterization. Application of the ESI-2007 Scale for Earthquake Analysis. Organized by the Gabinete de Neotectónica y Geomorfología - Instituto de Geología Emiliano Pedro Aparicio and supported by Fundación Williams, Asociación Argentina de Cuaternario y Geomorfología. Instructor: Alessandro Maria Michetti, profesor de la Università degli Studi dell'Insubria (22-26 September, San Juan univ., Argentina), https://aacg.ar/2025/03/18/curso-de-posgrado-from-active-fault-identification-to-seismic-hazard-characterization-application-of-the-esi-2007-scale-for-earthquake-analysis/

  -Angel Salas Colca received support to attend the IV Reunión de Campo de la AACG Mendoza 2025 "Grandes avalanchas de rocas y estratigrafía glacial cuaternaria en los Andes Centrales" del 18 al 20 de Noviembre de 2025 – Mendoza, Argentina. https://aacg.ar/4rcaacgmdz2025/

3.2. List of IGCP project meetings/symposia in 2025 *(please provide Form IV as attachment file)*.

IGCP 669 Annual Meeting during the 3rd OLLIN Training School https://www.ollinproyecto.com/datol-project-inqua

3.3. What kinds of activities has the project undertaken with respect to society and science outreach? *Please list educational, training or capacity building activities related to the IGCP project in 2025.*

In general, our main activity has an educational/training focus, since we dedicate most of our efforts to organising the annual training schools. As part of the annual meeting, we visited primary school children living in the Archidona area of Tena, Ecuador, who interacted with the Geoscience students and learnt how we study the landscape.

Also, we have been more active on social media this year (Instagram and Bluesky), making the lessons from the last few years at the Mendoza training school accessible.
(https://www.youtube.com/playlist?list=PLVjRFDAwvIzy-0wva47wJAaTM_zHw6n1C).

3.4. List of countries involved in project delivery. *Please indicate the countries active in 2025 only and not meeting/symposia participant countries.*

Countries involved in the Project this year are: Ecuador, Colombia, Argentina, Perú, Spain and France
Besides these countries, participants were attending from all these countries and also from Mexico and Chile.

3.5. Participation of international scientists to project meetings *(detail involvement from developing countries young and female scientists, please indicate exact numbers)*

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	Total number of scientists	*Number of male scientists*	*Number of female scientists*
Number of participating scientists	*57*	*33*	*24*
Number of young scientists/students (<35 years old)	*46*	*28*	*18*
Number of scientists from developing countries	*53*	*31*	*22*

See attached pdf file of participants of the main meeting and granted participants.

3.6. Provide a list of this year's publications (including maps), *(please provide an annex as attachment file)*.

See list of publication in the annex Publications

3.7. Activities involving other IGCP projects, UNESCO programmes, IUGS Commissions or Task Groups or others

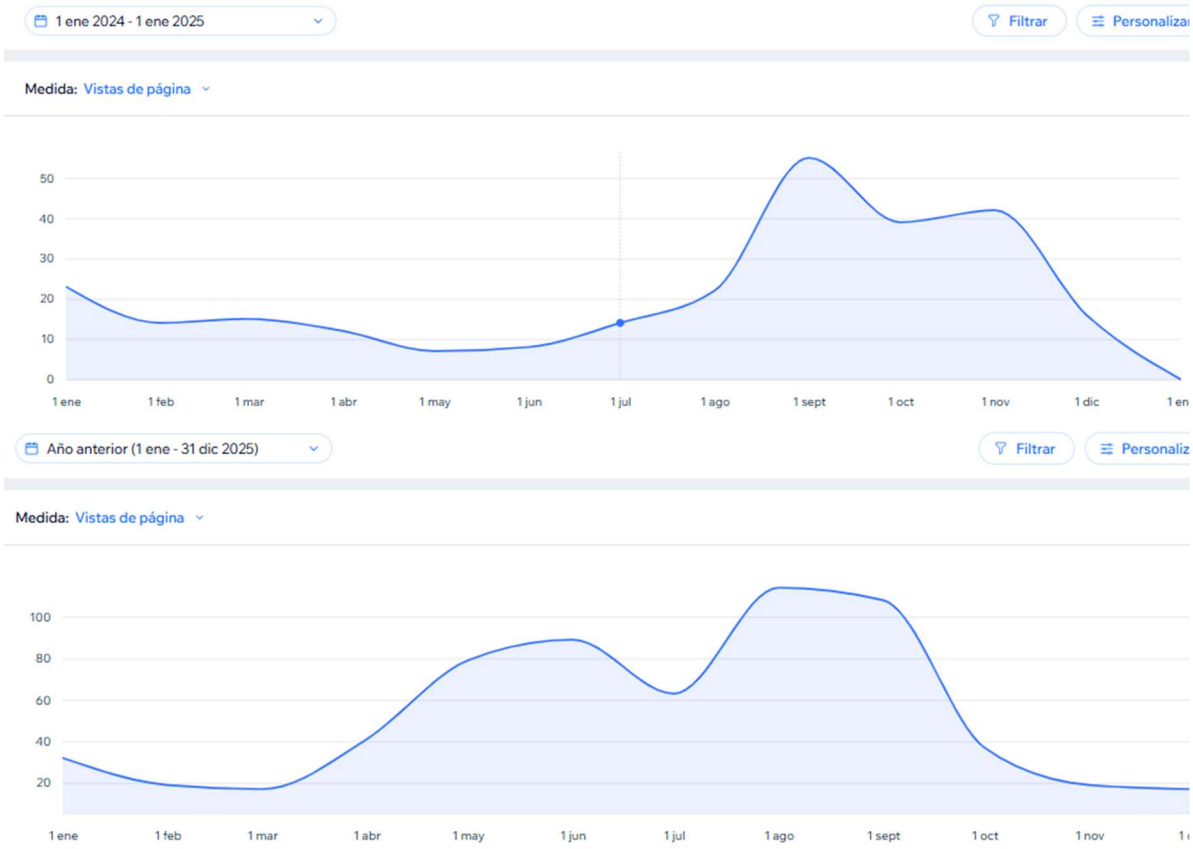
We got an INQUA grant closely related to the project aims and led by IGCP 669 members:

DATOIL- "DatOI (2515 s-y ISA) Funding: INQUA -Earthquake, Quaternary dating, Seismic Hazard, Paleoseismology, Morphotectonic".

3.8. Scientific Legacy: Is there a need for storage of publications, field data, and other results of the project? Do you have a clear vision concerning where the data would be stored and who will be the custodian?
It does not apply

3.9. What kind of public information (media reports, social media, etc.) has the project generated? And how is their impact evaluated?

The main channel of public information is the Instagram account (https://www.instagram.com/ollin_igcp669/) with 125 followers and an increasing activity, and the webpage of the project, which this year had a largest number of visits (between 114 and 17) compared to 2024 (between 55 and 7). The tables below show the countries from which a larger number of people was visiting the web. We received 635 visits from 177 visitors during 2025, a larger impact than those we had in 2024 (267 from 112 visitors).



Number of visits along 2024 (upper) and 2025 (lower)

Año anterior (1 ene - 31 dic 2025)

País	Vistas de página ↓	Visitantes úni...	Duración pro...
Resumen	**635**	**177**	**3min y 42s**
Perú	157	17	2min y 4s
Ecuador	126	38	3min y 27s
Francia	108	13	6min y 49s
España	69	19	4min y 47s
Colombia	48	16	4min y 3s
Estados Unidos	23	22	
México	20	9	1min y 58s
Argentina	17	7	1min y 49s
Chile	12	4	9min y 38s
Países Bajos	7	7	
Irlanda	7	5	
Marruecos	6	2	31s
Corea del Sur	6	1	1min y 44s
Italia	4	2	7min y 4s
Costa Rica	4	2	1min y 10s
Guinea	3	1	1min y 42s

Countries and numbers of visitors of the web page during 2025

3.10. Project highlight: Select one achievement that happened during the project this year to be highlighted on the UNESCO-IGCP website (*for example the publication of a book, the release of a documentary, a high-profile publication (level Science or Nature), the discovery of a fossil, etc.).*
You should provide a short text in layman's terms (max. 400 words) and an associated picture or video link, etc. which can be used for the IGCP website.

*The main activity of the OLLIN project (IGCP 669) during 2025 was the organization of the **third training school**, which this year focused on Dating techniques applied to Fault2sha (https://www.ollinproyecto.com/datol-project-inqua#summer-school)*
The school took place in September in Tena, Ecuador, and brought together 53 participants from 7 countries. Within the frame of the school, the annual meeting of the group took place and included two days of field trip in the area of Napo River, on the foothills of the Ecuadorian Andes and boundary of the Amazonas regions. The participants could have a close and practical view of the complexities of two quaternary dating techniques: OSL and cosmogenic exposure dating. We had the opportunity to visit deformed fluvial terraces and erratic blocs on the vicinity of Archidona, as well as the Napo-Sumaco Geopark, among other locations. The course was possible thanks to the co-sponsorship of Ikiam Univ. , INQUA (through project DatOI 2515 s-y ISA, led by Lea Pousse and Oswaldo Guzmán) and IRD-ISTerre (France). Some of the lessons will be available online in the near future. The lessons from the former school (Mendoza, Argentina 2024) are now accessible here:
https://www.youtube.com/playlist?list=PLVjRFDAwvIzy-0wva47wJAaTM_zHw6n1C

Other three milestones of the project this year have been: the First School on fault2SHA tools, hold in Madrid (Spain) last May, the Special course on Environmental site effects- ESI scale (led by Alessandro Michetti) in San Juan Univ. and the IV Annual Fieldwork meeting of the Society for the Quaternary and the Geomorphology in Mendoza (the two last ones in Argentina).

4. **Project response:** *Explain how IGCP Council 2025 recommendations were addressed by the project.*

Following the recommendations included in the final assessment of the 2024 project, we made an effort to be more present in the social media and in updating the web page, including the talks and online lessons from the two last training schools.

Training school 2024: https://www.youtube.com/playlist?list=PLVjRFDAwvIzy-0wva47wJAaTM_zHw6n1C

The recordings from 3 online lessons of 2025 are being edited and will be soon be accessible to everyone. During the training school in Ecuador, a group of students recorded five interviews to some of the instructors and participants, explaining the purpose and the aspects covered during the course. These videos are being published in Instagram and will be soon available in the web page as well.

5. **Deviations/changes from initial project proposal:** *Please indicate any changes from initial proposal and reasons for these changes.*

No changes

6. Activities planned for 2026

6.1. General goals

An online meeting for the members of the IGCP 669 network will be held on the 12th February 2025 to present the main achievements of the 6 years of life of the project and to discuss the new steps in the cycle that start. Even if continuation of the ICGC seems not possible under the current shape because the end of these calls, we are committed to continue interacting as a network and will prepare the proposal for new calls, from IUGS-Unesco and other institutions.

Activities under the umbrella of the two sponsored projects (**QUASEE** from INQUA and **RESISTE** from Spanish IGME) will continue during 2026.
Additionally, some of the members will meet in the VII Fault2SHA meeting in Vienna to continue the exchange and to explore new possibilities of collaboration.

6.2. Tentative list of specific meetings and field trips *(please list expected participating countries)*

-Online meeting to close the 6 years-cycle of IGCP 669 12th February 2026
-VII Fault2SHA meeting, 6th-8th July 2026, Vienna Austria. https://fault2sha.net/7th-workshop/

-Dating Extreme Events training school, in the frame of the QUASEE project (INQUA), August-September 2026 (tentative dates). Ecuador

-Iberfault meeting. We are preparing a special IGCP-669 session to be proposed for the Active Faults of Iberia meeting 9th-12th September, Granada (Spain). https://iberfault.org/

7. Request for on-extended-term-status (applicable only if 2025 was the last year of your project)

We are not extending the project any further

8. Financial statement ($ USD only): *Please indicate total funding received from UNESCO/IUGS since the start of the project (i.e.2022: $0k; 2023: $7k; 2024: $7k; 2025: $10k)*

We provide Form III with the financial statement showing the details of the 2025 funds *($11k)* destinations. Former years we received

2020 and 2021: *$0k*
2022; *$10k*
2023: $9k
2024: $7k

9. What additional funding besides the IGCP seed funding has the project obtained due to the IGCP label? *Please estimate the budget received for meetings, research or other activities and identify the source. Indicate total additional funding has been obtained since the start of the project.*

1) *Spanish Geological Survey (IGME-CSIC) Proyecto RESISTE- COOPB24084 (30k€ euros and two years long: 2025 and 2026). Led by Julián García Mayordomo*

We got two INQUA grants closely related to the project aims and led by IGCP 669 members:

2) DATOIL- "DatOI (2515 s-y ISA) Funding: INQUA -Earthquake, Quaternary dating, Seismic Hazard, Paleoseismology, Morphotectonic". 7000 USD/ IP: Lea Pausse- Univ de Grenoble and Oswaldo Guzmán Universidad Regional Amazónica Ikiam

3) QUASEE - Quaternary sediments as archives of extremes events / Funding: INQUA International Skill Activity (ISA) 2026 - 8000 Euros / IP: Corina Campos - Universidad Regional Amazónica Ikiam y Jose Isola - CONICET-Argentina.

10. Did all project leaders and participants inform their respective IGCP/IUGS National Committees?

Yes, we informed the Spanish representatives

11. Attach any information you may consider relevant

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Attachments *(check the box if document is attached or included)*

Financial statement-Form III	X
Meeting report(s)-Form IV	X
Other: Flyer of the Training School, participants lists	X

3.6. Provide a list of this year's publications (including maps), *(please provide an annex as attachment file)*.

a. could not have been published if not for this project and acknowledged as an IGCP project

- Cornejo, C., Guzmán, O., Campos, C. (2025). Soft-sediment deformation structures induced by seismic activity in the Upper Cretaceous Tena Formation - Oriente basin of Ecuador. Journal of South America Earth Sciences 153, 105365. https://doi.org/10.1016/j.jsames.2025.105365 . En los agradecmientos se incluye a Ollin.

- Cornejo, C., Guzmán, O., Campos, C., Cargua, C. (2024). Análisis paleosismológico en la zona subandina de Ecuador. Implicaciones para la falla Porotoyacu en: Guzmán O., Campos, C. (eds), Geociencias en la Amazonia Ecuatoriana: Aportes a la Planificación Sostenible. CEDIA & Universidad Regional Amazónica Ikiam, Ecuador. 44 - 61 pp https://doi.org/10.48661/W6DC-Q685

- Benites, B., Guzmán, O., Campos, C., Cornejo, C . (2024). Análisis de índices geomorfológicos en la zona subandina de Ecuador. Implicaciones para la actividad tectónica de la falla Tena en: Guzmán O., Campos, C. (eds), Geociencias en la Amazonia Ecuatoriana: Aportes a la Planificación Sostenible. CEDIA & Universidad Regional Amazónica Ikiam, Ecuador. 62 - 83 pp https://doi.org/10.48661/W6DC-Q685

b. related to this project

Audemard, F. A. (2025). Southern Boconó Fault, Venezuela. In: Cinti, f. Pantosti, d., Schwartz, d., Klinger, Y. (eds.): The Science and Art of Paleoseismology: images of paleoearthquake records from around the world, 48-51. ISBN 979-12-80282-09-5 (Primer estudio paleosísmico sobre la F. Boconó en 1986, en Atlas con 27 casos estudio internacionales).

Audemard M., F. A., 2025. The active trace of Boconó Fault, across Llano Corredor and Mucubají Passes (Highlands of the Cordillera de Mérida, Venezuela): Tectonic landforms and implications. Boletín de la Sociedad Geológica Mexicana 76(3), A170625. http://dx.doi.org/10.18268/BSGM2025v77n3a170625 (Cartografía de rasgos morfotectónicos a lo largo de un segmento de la F. Boconó de 40 km de largo, en ambiente periglacial)

Audemard m., f. A., alvarado, l., arnaiz, m., romero, g., reinoza gómez, c. E., martínez g., a. I., sánchez gamboa, a. K., lebrun, j.-f., rodríguez d., l.m., rodríguez, j. A., philippon, m., singer p., a., gonzález, j., lotuffo a., M., 2025. Sismicidad de profundidad intermedia de la losa de subducción de las Antillas menores, próxima a la península de Paria, Venezuela. Boletín de Geología, 47(1), 105-127. https://doi. org/10.18273/revbol.v47n1-2025005. (Sismos con doble epicentro macrosísmico no contemplados en la Norma Sismorresistente Nacional).

Benavente, C., L Audin, A Palomino, L Rosell, B García, E Aguirre, S Baize, et al. (2025). Tectonic complexity of the Incapuquio Fault System, Peruvian Andes: Paleoseismic evidence for cascading Mw7 earthquakes along the Western Andean Front. Tectonophysics, 2308772025

Gómez-Vasconcelos M.G., Avellán D.R., Avila García J., Lacan P., Israde-Alcántara I., García O., Aray Castellano J., Audin L. (2025) The potential seismic hazard of the Tarímbaro-Álvaro Obregón fault, a major structure of the Morelia-Acambay fault system in central México. Natural Hazards. 121; 109-133 https://doi.org/10.1007/s11069-024-06832-6

Harrichhausen, N., L Marconato, L Audin, P Lacan, S Baize, H Jomard (2025)., Distributed right-lateral strain at the northern boundary of the Quito-Latacunga microblock. EGUsphere 2025, 1-342025

Marconato, L., L Audin, MP Doin, JM Nocquet, P Jarrin, F Rolandone, et al. (2025). Internal deformation of the North Andean Sliver in Ecuador and southern Colombia observed by InSAR Geophysical Journal International 239 (3), 1557-1575

Martinez-Jaramillo D., Zùñiga F.R., Wyss M., Lacan P., Nunez-Meneses A.D. (2025) Fatality Estimates based on Earthquake Modeling in the Guadalajara Metropolitan Area. Natural Hazards, https://doi.org/10.1007/s11069-025-07247-7.

Peuzin, A., M Saillard, N Espurt, R Braucher, M Regnier, G Duclaux. (2025). Late Pleistocene thrust tectonics in the north Peruvian forearc revealed by Terrestrial Cosmogenic Nuclides surface exposure dating, field structural data and seismic profiles Tectonophysics, 230798

Pousse-Beltran L., Lallemand T., Audin L., Lacan P., Nunez-Meneses A.D., Giffard-Roisin S. (2025) ScarpLearn: an automatic scarp height measurement of normal fault scarps using convolutional neural networks. Seismica, 4, 2. https://doi.org/10.26443/seismica.v4i2.1387

Rosler, b., castro-artola, o., martínez, a., reinoza, c. E., yegres h., l. A., vidal-villegas, j. A. & audemard M., F. A., 2025. Seismicity and Active Seismic Structures in the Valle de la Trinidad, Mexico. Journal of Seismology. https://doi.org/10.1007/s10950-025-10330-y (Sistema de fallas conjugadas activas en la frontera transformante-centro de expansión del Golfo de California, por demostración sismológica)

Wagner, L. S., Prieto, G. A., Montes, C., Ramos, J. P., Dionicio, V., & Pedraza, P. (2025). Breaking the Caribbean Plate: Subduction initiation beneath the northern margin of Panama. Geophysical Research Letters, 52(18), e2025GL116734.