



2021  
INTERNATIONAL YEAR  
OF CAVES AND KARST



| Date                     | Event Name   | For more information   | Platform  | Institution   | Location                                     | Event Description  |
|--------------------------|--|--|---|---|--|--|
| January 25 <sup>th</sup> | The Yucatan Aquifer<br><br>Apnea at Cenotillo                  | MSc. Alejandro López Tamayo<br><a href="mailto:direccion@centinelasdelagua.org">direccion@centinelasdelagua.org</a>  | Cenotillo, Yucatan<br><br>Freediving World Record – Apnea en Cenote                                 | Centinelas del Agua A.C. – Lemus Underwater School Freediving | Cenotillo, Yucatan, Mexico                   | The apnea world record Guinness will be try to be get at a Cenote in Yucatan. At the same time Centinelas del Agua will give a workshop to the community about the caves, cenotes and the karst aquifer.                         |
| January 26 <sup>th</sup> | Workshop: Aquifer of the Yucatan Peninsula                     | MSc. Alejandro López Tamayo<br><a href="mailto:direccion@centinelasdelagua.org">direccion@centinelasdelagua.org</a>  | On-site workshop at the Valladolid town hall.   | Centinelas del Agua A.C. and ACM Consulting                   | Valladolid City Hall                         | A workshop on the aquifer of the Yucatan Peninsula was given to collaborators of the Valladolid City Hall.   |
| January 26 <sup>th</sup> | Educational Workshop: Aquifer of the Yucatan Peninsula         | MSc. Viridiana Nava Ruiz<br><a href="mailto:investigacion@centinelasdelagua.org">investigacion@centinelasdelagua.org</a><br><br>Ing. Juanis Itzel Castillo Badillo<br><a href="mailto:karst@centinelasdelagua.org">karst@centinelasdelagua.org</a> | On-site workshop at the Valladolid town hall.   | Centinelas del Agua A.C.                                      | Instituto Tecnológico Superior de Valladolid | Within the framework of the IYCK, Centinelas del Agua gave a workshop in which the sustainable use of water was promoted as part of the “Camp for scientific and technological vocations for young people from eastern Yucatán”. |
| March 8 <sup>th</sup>    | Webinar: CINDAQ 20 Years Exploring the Aquifer of Quintana Roo | MSc. Alejandro López Tamayo<br><a href="mailto:direccion@centinelasdelagua.org">direccion@centinelasdelagua.org</a><br><br>MSc. Sam Meacham  | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a> | Centinelas del Agua A.C. and CINDAQ                           | Web / Cancun, Mexico                         | Within the framework of the IYCK, Centinelas del Agua in collaboration with M. en C. Sam Meachan, hosted a Webinar where they talked about the techniques that are being used for the exploration of the Quintana Roo aquifer.   |
| March 18 <sup>th</sup>   | Webinar: Scientific Research at                                | MSc. Viridiana Nava Ruiz   | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a> | Centinelas del Agua A.C. and UNAM                             | Web / Cancun, Mexico                         | The scientific reasearch around the karst aquifer have been really important   |



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|-------------------|--|------------------------------------|--|---|---|--|---|
|                   | Chicxulub Crater   |                                    | <a href="mailto:investigacion@centinelasdelagua.org">investigacion@centinelasdelagua.org</a> |   |   | for the local ecological zoning plans, and it is important to spread this information with the citizens. |   |
| <b>April 14th</b> | Webinar: Water quality monitoring network in the coastal karst aquifer of Quintana Roo | MSc. Alejandro López Tamayo        | <a href="mailto:direccion@centinelasdelagua.org">direccion@centinelasdelagua.org</a>         | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a> | Centinelas del Agua A.C.                              | Web, Cancun, Mexico  | Centinelas del Agua have been monitoring more than 200 sites around the coastal karst aquifer in order to know the water quality and the presence of certain kind of pollutants. All the information that we got supports the local ecological zoning plans in order to get an integrated water management for karst aquifers and to prevent the pollution of the freshwater. |
| <b>May 18th</b>   | Workshop: Create your own karst aquifero   | MSc. Viridiana Nava Ruiz           | <a href="mailto:investigacion@centinelasdelagua.org">investigacion@centinelasdelagua.org</a> | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a> | Centinelas del Agua A.C. and Kayok Planetarium-Cancún | Playa del Carmen and Cancun Quintana Roo, Mexico   | Centinelas del Agua has 10 years working in environmental education to spread the knowledge about the karst aquifer, we will made a workshop with students to give them the comprehension of the karst.   |
| <b>June 15th</b>  | Learning by playing: the wonderful world of caves and karst through board games        | Eng. Juanis Itzel Castillo Badillo | <a href="mailto:karst@centinelasdelagua.org">karst@centinelasdelagua.org</a>                 | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a> | Centinelas del Agua A.C.                              | Solferino, Quintana Roo, Mexico  | The pedagogy for the sustainability have been really important through learning by playing. Centinelas del Agua A.C. developed board games in order to learn the technical concepts of the karst in a funny way.  |



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| <b>July 14th</b>      | Handbook: Best practices for caves and cenotes  | MSc. Alejandro López Tamayo<br>direccion@centinelasdelagua.org  | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a><br><br><a href="http://www.centinelasdelagua.org">www.centinelasdelagua.org</a> | Centinelas del Agua A.C.                 | Akumal, Quintana Roo, Mexico   | Centinelas del Agua developed a handbook for all the tourists that visit the Mexican Caribbean and the cenotes in order to have a sustainable tourism in the dolines to prevent the pollution.   |
| <b>AUGUST 24TH</b>    | Art exposition: Karst systems in Mexico   | MSc. Viridiana Nava Ruiz<br>investigacion@centinelasdelagua.org   | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a><br><br><a href="http://www.centinelasdelagua.org">www.centinelasdelagua.org</a> | Río Secreto and Centinelas del Agua A.C. | Playa del Carmen, Quintana Roo | The magnificence of the karst systems will be exposed through an art exposition from different areas of the karst systems in Mexico.   |
| <b>August 27th</b>    | 10 <sup>th</sup> anniversary of Centinelas del Agua A.C.: An institution to preserve the coastal karst aquifer in the Yucatan Peninsula | MSc. Alejandro López Tamayo<br>direccion@centinelasdelagua.org<br><br>MSc. Viridiana Nava Rodríguez<br>investigacion@centinelasdelagua.org<br><br>Eng. Juanis Itzel Castillo Badillo<br>karst@centinelasdelagua.org | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a><br><br><a href="http://www.centinelasdelagua.org">www.centinelasdelagua.org</a> | Centinelas del Agua A.C.                 | Parque Maya, Cancun, Mexico    | 10 years of Centinelas del Agua A.C. working on preserve the freshwater from the coastal karst aquifer of the Yucatan peninsula will be celebrated . Through a timeline of workshops, environmental education, scientific research and community work. |
| <b>September 14th</b> | Speleogenesis for dummies: naming speleothems   | Eng. Juanis Itzel Castillo Badillo<br>karst@centinelasdelagua.org   | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a><br><br><a href="http://www.centinelasdelagua.org">www.centinelasdelagua.org</a> | Centinelas del Agua A.C. and UNAM        | Web, Mexico                    | Is it hard to learn the karst? It is not, through this webinar you can learn all the speleothems about the caves in a funny way.   |
| <b>OCTOBER 21TH</b>   | Animated video: a journey   | MSc. Alejandro López Tamayo<br>direccion@centinelasdelagua.org  | <a href="https://www.facebook.com/CentinelasDelAgua">https://www.facebook.com/CentinelasDelAgua</a><br><br><a href="http://www.centinelasdelagua.org">www.centinelasdelagua.org</a> | Centinelas del Agua A.C.                 | Web, Mexico                    | Sometimes it is really difficult to understand the hydrodynamics of the karst  |



through the karst aquifer of the yucatan peninsula

[www.centinelasdelagua.org](http://www.centinelasdelagua.org)

aquifer, by this reason Centinelas del Agua AC developed an animated video to explain how the groundwater moves, why it is so vulnerable to the pollution and how the aquifer connects the jungle with the reef.

**NOVEMBER 16TH**

Panel: Geoparks in Mexico: a proposal for the first Geopark in a karst system in Mexico

MSc. Viridiana Nava Ruiz  
investigacion@centinelasdelagua.org

<https://www.facebook.com/CentinelasDelAgua>  
[www.centinelasdelagua.org](http://www.centinelasdelagua.org)

Centinelas del Agua A.C., Río Secreto, Alltournative and UNAM

Web, Mexico

The geology is an amazing science, and in the last years have been really important to spread the knowledge about the geological time, the rocks, the minerals and in the Yucatan Peninsula the relevance of the caves for the freshwater. Centinelas del Agua will present a proposal for a Geopark in Playa del Carmen.

**December 7th**

Biodiversity in the caves of the karst aquifer in Yucatan Peninsula

Eng. Juanis Itzel Castillo Badillo  
[karst@centinelasdelagua.org](mailto:karst@centinelasdelagua.org)

<https://www.facebook.com/CentinelasDelAgua>  
[www.centinelasdelagua.org](http://www.centinelasdelagua.org)

Centinelas del Agua A.C. and UNAM

Web, Mexico

Life on caves? Yes! You will discover all the life that lives in the dark through the caves and cenotes in the Yucatan Peninsula.

Every month will be cenote (doline) cleaning campaigns in Cancún, Quintana Roo.

For more information visit: [www.centinelasdelagua.org](http://www.centinelasdelagua.org)

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[info@centinelasdelagua.org](mailto:info@centinelasdelagua.org)