

10 January 2017
 pbau

Research project agreement

Peter Bauer-Gottwein, "professor" at DTU Environment and Gonzalo Merediz Alonso "Executive Director" as representative of Amigos de Sian Ka'an, share similar interests in terms of monitoring, modelling and protection of natural resources, especially regarding the water bodies in the karstic aquifers of Yucatan Peninsula. Within this research proposal, DTU Environment and Amigos de Sian Ka'an agree on conducting joint research on the use of UAVs (Unmanned Aerial Vehicles) equipped with innovative sensors to monitor a small number of cenotes and lagoons located in the State of Quintana Roo in Mexico. The surveys will serve as a proof of concept of the potential of this technology, developed at DTU Environment, to monitor the water level and the bathymetry of these water bodies that have unique characteristics in the world.

The activities are carried out without any commercial purpose, just for scientific reasons and to support regional-scale water resources management. The results of this investigation will be shared between both Institutions, and together shall determine the form and terms in which the information should be used or published; including technical, academic and dissemination purposes, as long as it does not contravene or endanger copyright or industrial property rights.

Filippo Bandini, PhD student at DTU Environment will be in charge of conducting flights in the areas below with a DJI Spreading Wings 900 hexacopter, serial number S/N 370066105 with the support of Alejandro López Tamayo from Amigos de Sian Ka'an A.C. The surveys will be conducted in the following areas, listed with WGS84 coordinates. In none of the locations, the flight height will be more than 80 m from ground level. Visual line-of-sight of the drone will be kept during all the flights.

Site	Coordinates WGS84 (D° M' S")
Muyil:	20° 2'39.74"N; 87°35'44.49"W
	20° 4'15.43"N; 87°36'2.25"W
	20° 6'1.10"N; 87°34'47.96"W
	20° 9'39.11"N; 87°33'15.63"W
	20°13'6.69"N; 87°32'0.20"W
Chacah-Veracruz:	19°29'10.03"N; 87°59'17.07"W
	19°28'58.22"N; 87°59'38.90"W
	19°28'58.76"N; 87°59'38.96"W
Ocom:	19°28'24.65"N; 88° 2'30.58"W
	19°28'24.32"N; 88° 3'16.76"W
	19°28'18.86"N; 88° 4'6.98"W

	19°28'2.97"N; 88° 4'45.06"W
	19°27'41.25"N; 88° 5'33.14"W
	19°27'48.49"N; 88° 6'42.59"W
Noh-Cah:	19°25'14.30"N; 88°10'18.27"W
	19°25'11.18"N; 88°10'3.71"W
Tixmul:	19°17'58.05"N; 88°20'55.64"W
LOCATION OF A REAL CENOTE	

Applicable Law

This contract shall be governed by the laws of the State of Quintana Roo and any application of the Mexican Federal Law.

Signatures

In witness of their agreement to the terms above, the parties or their authorized agents hereby affix their signatures:

January 10, 2017

Peter Bauer-Gottwein

Gonzalo Merediz Alonso

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 México.

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 Phone: 9988922958

Peter Bauer - Gottwein

[Signature]

(Signature of Peter Bauer-Gottwein)

(Signature of Gonzalo Merediz)