INSTITUTO NACIONAL DE ECOLOGÍA Y CAMBIO CLIMÁTICO
INFORME DE COMISIÓN

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INSTITUTO NACIONAL DE ECOLOGÍA Y CAMBIO CLIMÁTICO

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FOLIO 96

DATOS GENERALES

UNIDAD ADMINISTRATIVA	COORDINACIÓN DE ADAPTACIÓN AL CAMBIO CLIMÁTICO
EVENTO	Reunión anual del Comité Trilateral para la Conservación y Manejo de la Vida Silvestre y los Ecosistemas
LUGAR	Shepherdstown, West Virginia, USA
FECHA DE REALIZACIÓN	08 al 13 de abril de 2018

INFORME

OBJETIVO DEL PROMARNAT QUE CUMPLE	México próspero. Objetivo 4.4. Estretegia 4.4.1. y 4.4.4. Objetivo 6.
TEMA PRIORITARIO DEL PROGRAMA INSTITUCIONAL	-Fortalecimiento de capacidades y cooperación científica y técnica -Monitoreo ambiental

OBJETIVO DE LA COMISIÓN

-Ser la Co-Chair de la Mesa de "Conservación de Ecosistemas" de la Reunión Trilateral.
-Presentar los temas preparados por la CGACC ante la Mesa. Tomar acuerdos y dar seguimiento de los mismos.

ACTIVIDADES REALIZADAS POR EL COMISIONADO

- Moderar y liderar la mesa.
- Presentación de 2 temas ante la Mesa de Ecosistemas:

Land Use/Land Cover change and extreme climatic events in the arid and semiarid ecoregions of Mexico y Ecosystem Function and Traditional Ecological Knowledge: building resilience and adapting to climate change in North America
FINAL RESULTS

RESULTADOS OBTENIDOS Y LOGROS PARA EL INECC

- Se estrechó la relación con el Comité Trilateral de América del Norte.
- Actualmente tenemos una mayor certeza sobre las posibles sinergias y colaboraciones Comité Trilateral - INECC.
- Se acordó que para la reunión de 2020 la temática de la plenaria será "Océanos e islas".

CONCLUSIONES

La participación en esta reunión fue sumamente enriquecedora en términos académicos y de gestión de política pública a nivel internacional. Me ha provisto de elementos de información, fuentes y contáctos que permitirán una mejor aportación a otros proyectos y grupos de trabajo en los que participo, particularmente el Atlas Nacional de Vulnerabilidad ante el Cambio Climático.

REQUIERE SEGUIMIENTO:	si
SE INCLUYEN ANEXOS:	Si

PAOLA MASSYEL GARCÍA MENESES

Subdirectora de Conservación de Comunidades y Adaptación al Cambio Climático

Declaro bajo protesta de decir verdad, que los datos contenidos en este informe son verídicos y manifiesto tener conocimiento de las sanciones que se aplicarán en caso contrario.

Using Ecosystem Function and Traditional Ecological Knowledge Together to Build Resilience and Adapt to Climate Change in North

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- 2015-2017 CEC project
- Sustainable Communities and Ecosystems strategic priority
- Priority Species and Ecosystems and Sustainable Communities subthemes

- US Environmental Protection Agency, Instituto Nacional de Ecologia y Cambio Climatico (National Institute of Ecology and climate Change) &Indigenous and Northen Affairs Canada

Discussion and Conclusions

- There is strong evidence that climate change will modify the intensity and frequency of ECE.
- Using data of droughts, floods, low temperatures and tropical cyclones as well as degradation in arid and semiarid Mexican ecoregions we:
- a) defined overall exposure to ECEs and
- b) pinpointed areas where LULCC overlap with high scores of ECEs impact.
- Although an ecoregions' risk of negative impacts from extreme climatic events depends not only on its exposure but also its adaptive capacity and intrinsic sensitivity, identifying regions with high climatic exposure can help to reduce the uncertainty in identifying areas least likely to be resilient to future impacts, and provide a more informed evaluation of current degradation status, to better guide management for a changing environment.

Land Use/Land Cover change and Extreme climatic events in the arid and semiarid ecoregions of Mexico

Methods

- To analyze LULCC processes we focused on two of the land use and vegetation maps generated by INEGI.
- The accuracy of these maps is determined by their scale (1:250,000) and resolution (1 m) (INEGI, 2015).
- In this study we used the maps corresponding to 2002 (Series III) and 2011 (Series V) sampling periods, obtained in shapefile format from INEGI's website.
- To analyze LULCC over the selected period in arid and semiarid Mexican ecoregions, we first clipped the Series layer Series III (INEGI, 2002), Series V (INEGI, 2011) with the ecoregion layer (CONABIO, 2008); then we performed a geographical intersection between the series layers to obtain the change in land cover polygons and estimate vegetation loss. All geospatial processing was performed using ArcGis (v.10.3; ESRI 2014).

Land Use/Land Cover change and extreme climatic events in the arid and semiarid ecoregions of Mexico

- In this study, we characterize LULCC from 2002 to 2011 (the most recent data public available) in these ecoregions, to determine differences in the spatial extent of human land use during this period.
- We describe the current state of exposure to drought, tropical cyclones, low temperatures and flooding in the arid and semi-arid ecoregions of Mexico.
- We synthesize the findings of diverse studies regarding observed trends in temperature and precipitation in the arid and semi-arid ecoregions of Mexico. With these, we aim to assess possible synergies between these drivers.

Land Use/Land Cover change and extreme climatic events in the arid and semiarid ecoregions of Mexico

- In Mexico, arid and semiarid lands are **60% o**
- They offer a large amount of ecosystem services and many endemic species can be found there.
- Together they encompass 639,881 km² from the central portion of the territory to the north, along the border of the United States.
- They are relatively understudied, both in terms of their biotic and abiotic processes (Flores Olvera, 2011).
- Land cover in these ecoregions continues to undergo profound changes due to the development of crop and livestock farming (SAGARPA, 2014).

Desierto de Chihuahua en el norte de México

Thank you!

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