



# A critical look at One Health and EcoHealth developments in LatinAmerica

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September 11th, 2018

Bologna, Italy

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# Outline

1. The short history of One Health in our institution
2. An overview of the application of these concepts in the region
3. Rabies in Colombia as an example of non cooperation between sectors
4. Highligths of NEOH survey in Latin American context.



# The Project SapuvetNet



- Luis Carlos Villamil
- Natalia Cediél Becerra
- Jaime Romero Prada



# Sapuvet -case studies





## Case Study

### Venezuelan Equine Encephalitis Outbreak



- Animal and public health

**Adittional material:**  
"Encefalitis equinas en salud pública"  
book

# Event SapuVet, March 2012 - attitudes



## Prácticas y actitudes profesionales en las tres dimensiones del concepto Una Salud

Jaime Romero PhD  
Diana Álvarez MSc  
Iván Calvache MSc



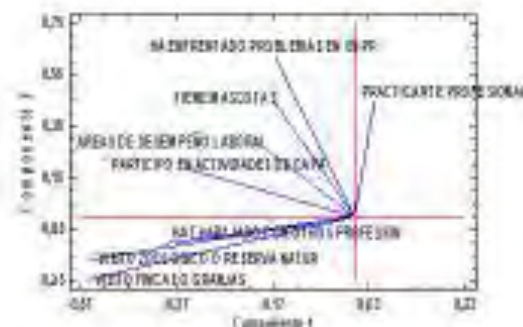


# Multivariate analysis

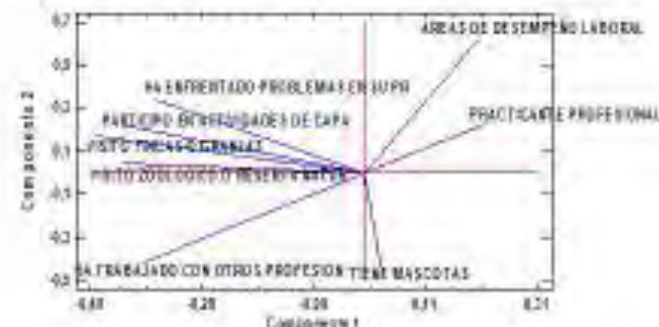
## MULTIVARIADO CONCEPTO UNA SALUD

PROFESIONALES

COMPONENTES PRINCIPALES CONOCIMIENTO DEL CONCEPTO SALUD ANIMAL PROFESIONALES



COMPONENTES PRINCIPALES CONOCIMIENTO DEL CONCEPTO PROFESIONALES SALUD HUMANA



COMPONENTES PRINCIPALES CONOCIMIENTO DEL CONCEPTO PROFESIONALES MEDIO AMBIENTE



- Concepts
- Undergraduate formation
- Labor experiences and possibilities
- Previous conditioning factors (farms, pets, etc.)



# OH-EC Activities, Universidad de la Salle: November 2017



- Dr. Juan Garza, México. One Health in Latin America
- Dr. Daniele de Meneghi (Italy) - presented preliminary results of cost OH-NEOH survey in Europe and an evaluation OH case study
- Suggestion to be involved in a Latin American survey on OH



# Benavides, Faculty's conference to teachers at the beginning of the semester, 1-2018





# The roadmap to OH



## El mapa para la agenda Una Salud

GAB Reviews 2017 12: No. 018

### Roadmap to a One Health Agenda 2030

Kevin Quennessen<sup>1</sup>, Julie Gamier<sup>2</sup>, Liza Rosenbaum Nielsen<sup>3</sup>, Sandra Buttigieg<sup>4</sup>, Daniele de Mareghi<sup>5</sup>,  
Martin Holmberg<sup>6</sup>, Jakob Zinsstag<sup>7-9</sup>, Simon Ruegg<sup>9</sup>, Barbara Hässler<sup>1</sup> and Richard Kock<sup>1</sup>

- Figure 1 A framework grouping the SDGs based on their intended outcomes, highlighting goals (in yellow) with antagonistic relationships with other goals. Adapted from Waage et al. [58].

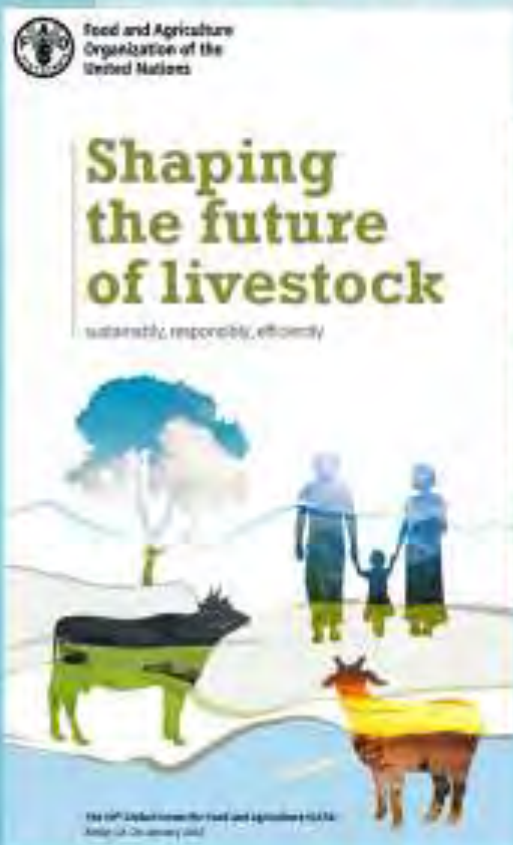




# Sustainable Livestock Production

## The 10th Global Forum for Food and Agriculture (GFFA) Berlin, 18–20 January 2018

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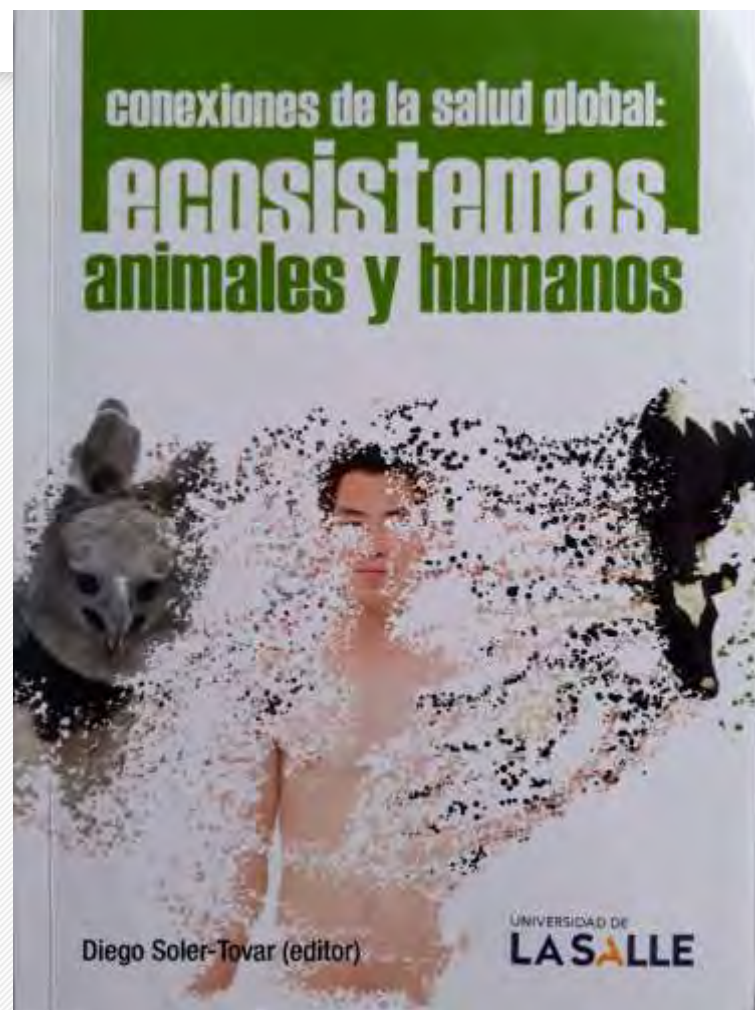
### Livestock and the 2030 Agenda for Sustainable Development

In January 2016 the United Nations launched the 2030 Agenda for Sustainable Development. The 17 SDGs seek to address, in a sustainable manner, the root causes of poverty and hunger and the universal need for development. With sustainability at its core, the topics covered by the 10th GFFA are highly relevant to achieving the SDGs.





# Universidad de la Salle - OH initiatives



(Soler, D.(ed.) 2017)

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Vicerrectoría Académica  
Coordinación de Currículo

**Formato básico oficial para la elaboración de Syllabus – microcurrículo**  
PROGRAMAS NUEVOS O REDIMENSIONADOS - 2011

Identificación del Espacio Académico	
Facultad:	VICERRECTORIA DE PROMOCION Y DESARROLLO HUMANO
Nombre del Espacio Académico:	Código: DHA-16
SALUD HUMANA, ANIMAL Y AMBIENTAL PARA EL LOGRO DE LA AGENDA DE DESARROLLO SOSTENIBLE 2030: INICIATIVA "UNA SALUD"	
Área Curricular:	Tipo de Espacio Académico: Común__
Fundamentadora__ Profesional__ Complementaria_X__	Programa__ Facultad__
Praxis Investigativa__	Electiva: Disciplinar__ Facultad__
	Interdisciplinar__X__
Periodo académico en la malla curricular: I Ciclo 2018	Fecha: Febrero 2018
Número de Créditos: HP: __3__ HI: __3__	
Horario: MARTES 4-7 PM (Salón S6)	Modalidad: Teórica__X__ Taller__ Laboratorio__ Otra:
Nombre Profesor: Docente coordinador: Natalia Cediell Becerra Escuela de pensamiento cultura, salud pública y desarrollo comunitario.	
Profesores invitados de diferentes disciplinas:	

2018. Elective course on One Health and 2030 Agenda



# Other products - Universidad de la Salle

## Una salud: estrategia para la docencia

y la investigación interdisciplinar

Luis Carlos Villamil Jiménez\*

### ■ Resumen

En este artículo se presenta una síntesis sobre la visión de las diversas culturas en el tema sanitario, la percepción temprana del concepto *una salud*, los hechos y tendencias que orientaron las políticas de salud pública; además, se muestra cómo la emergencia de enfermedades y las inequidades en salud señalan la necesidad por aplicar una estrategia racional eficiente que desde la intersectorialidad y la interdisciplinariedad contribuya a la solución de los problemas sentidos en el ámbito global y que se configure y adopte la estrategia de *una salud*, como una poderosa

(Villamil, 2015)

MINSALUD

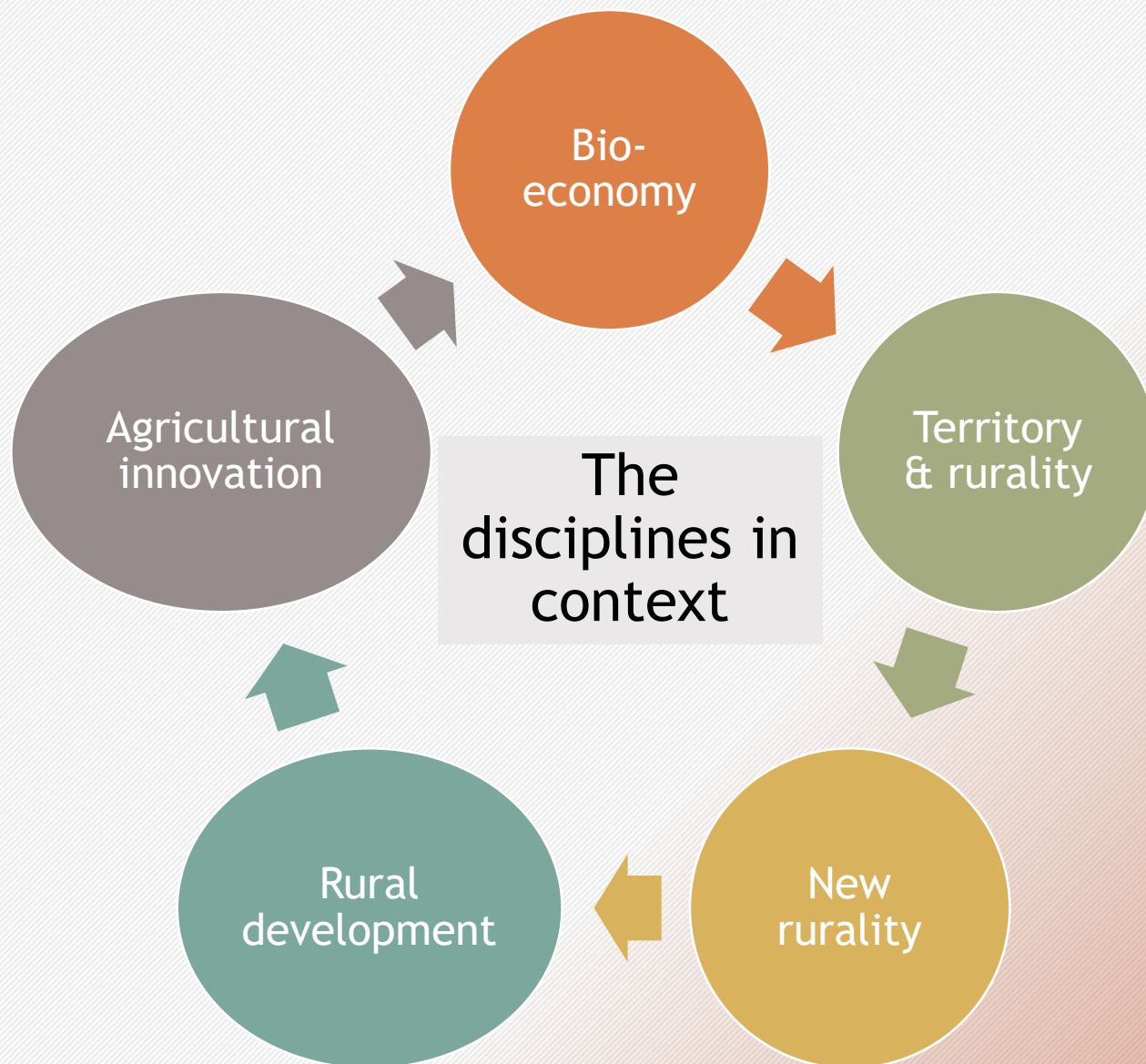


## Propuesta de Programa Nacional Integral e Integrado de Zoonosis (PNIIZ) SCON2016-00326

(Soler et al., 2016.) Research supporting decision making on public policy for zoonosis control.



# Agrisciences - Master and doctorate



- Sustainable development
- Millennium Development Objectives -MDO
- Systemic approach
- Inter-disciplinary
- Colombian post-conflict
- Technology transfer
- Social Knowledge appropriation
- One Health



# On going initiatives



# The colombian Sustainable livestock initiative...

La Mesa de Ganadería Sostenible – Colombia (MGS-Co), es un espacio de participación interinstitucional que nace como un compromiso para identificar la importancia de contar con un órgano consultor que tenga conocimiento técnico sobre la ganadería sostenible en el país y que sea un referente en el proceso de construcción de planes, programas y proyectos en torno a la ganadería sostenible.

La MESA tendrá como objeto principal, la realización de actividades encaminadas a apoyar en la estructuración de políticas públicas, y el desarrollo de programas, planes y proyectos relacionados con la ganadería sostenible en Colombia.



<http://mesaganaderiasoste.wixsite.com/principal>

(Simavides, 2017C)

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# Los sumideros de carbono...

## AS PEGADAS DE CARBONO DA CARNE A PASTO

**INDICADOR DE CARBONO DA FABRICAÇÃO DA CARNE**      **INDICADOR DE CARBONO DO MANEJO DO PASTO**

Componente	Valor (Tons de CO <sub>2</sub> e)	Unidade
Carne (80 tons)	80	por 50 vacas (100 vacas)
Trator (32 tons)	32	por 100 km (100 km)
<b>Total (112 tons)</b>	<b>112</b>	<b>por 100 km</b>
Pasto (500 tons)	500	por 100 km
<b>Armazenamento líquido (388 tons)</b>	<b>388</b>	<b>por 100 km</b>

**Produção Total: 112 Tons de CO<sub>2</sub>e**

**Segregação Total: 500 Tons de CO<sub>2</sub>e**

**Armazenamento líquido: 388 Tons de CO<sub>2</sub>e**

**Da atmosfera para o solo**

— Consórcio entre as unidades de Conservação —

**Agriculture, Ecosystems and Environment**

Journal homepage: [www.elsevier.com/locate/agrue](http://www.elsevier.com/locate/agrue)

**Extensive grazing in contrast to mowing is climate-friendly based on the farm-scale greenhouse gas balance**

Peter Kancz<sup>a,\*</sup>, Konstantinos Papan<sup>a</sup>, János Balogh<sup>b</sup>, Marianna Papp<sup>b</sup>, Dóra Hidy<sup>b</sup>, Zoltán Csizsárik<sup>c</sup>, Erik Molnár<sup>c</sup>, Albert Szendrői<sup>c</sup>, Györgyi Keszthelyi<sup>c</sup>, László Herold<sup>d</sup>, Zoltán Nagy<sup>e,f</sup>

<sup>a</sup>INM-IGZ, Free-Range Grazing & Farm-System Science, University of Applied Sciences, 1049 Budapest, Hungary

<sup>b</sup>Center for Environmental Studies, University of Debrecen, 4002 Debrecen, Hungary

<sup>c</sup>Center for Environmental Studies, University of Debrecen, 4002 Debrecen, Hungary

<sup>d</sup>Center for Environmental Studies, University of Debrecen, 4002 Debrecen, Hungary

<sup>e</sup>Center for Environmental Studies, University of Debrecen, 4002 Debrecen, Hungary

<sup>f</sup>Center for Environmental Studies, University of Debrecen, 4002 Debrecen, Hungary

**Net carbon storage**

**F<sub>net</sub>**

**F<sub>FH</sub>**

**F<sub>CH4</sub>**

**F<sub>CO2</sub>**

**F<sub>VOC</sub>**

**F<sub>ferment</sub>**

**F<sub>animal products</sub>**

**F<sub>feces</sub>**

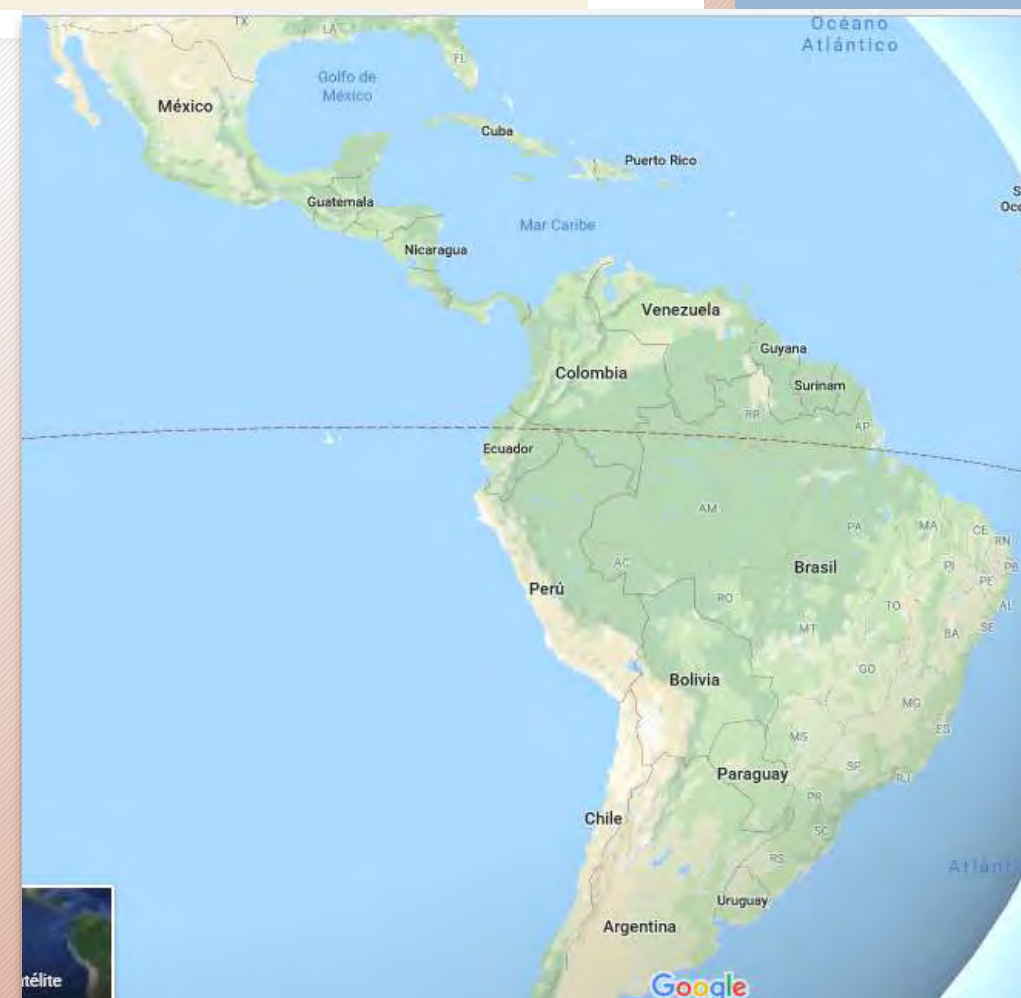
**F<sub>erosion</sub>**



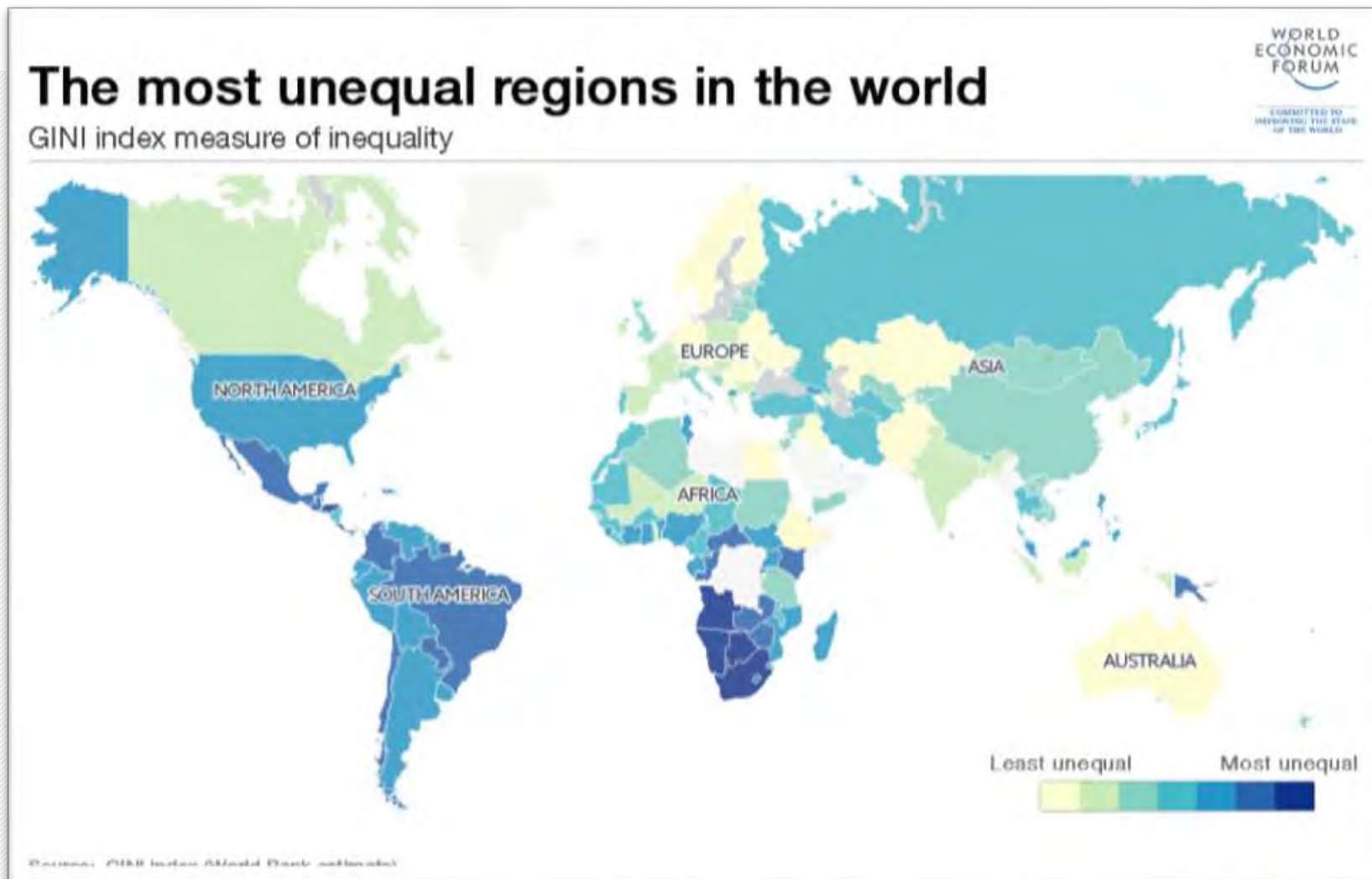
## Trends in OH and EH concept's application in the region

- Tremendous inequality in the region
- More than 200 million people are at risk of contracting multiple NTDs (ascariasis, trichuriasis, hookworm, schistosomiasis, lymphatic filariasis, trachoma, and onchocerciasis).

(Cassidy-Seyoum, 2014)



# South American inequality



Social determinants of health characterized by adverse colonial legacies, tremendous social injustice, huge socioeconomic disparities, and wide health inequities. (Rifat, 2015).



# Prioritization and allocation of resources

- ¿Who takes the decisions?
- Ministries (Health, Agriculture, environment)
- Sincerely each sector makes its own interpretation
- The example of Chagas disease in the region, mainly Venezuela, oral transmission (juices) and socioeconomic conditions
- 37 cases in 2017 in Colombia
- Situation is worst for Leishmaniasis (considered a conflict-related disease) 11,657 cases-2014 and 11,850 cases-2016.



(Flores-Ferrer et al., 2017)



# Support for the concept in the 3 sectors

- Some aspects of the integration and implementation of the One Health concept are still a challenge.
- Discussions should focus on how One Health approaches are actually implemented and not on how they are defined.
- In pursuing collaborative approaches the justifiable differences in priorities between the human health and agriculture ministries must be taken into account.
- In addition, where agriculture has a major private enterprise component, reluctance to participate in information sharing between the private and the public sectors can be a major barrier for implementing One Health surveillance.

(FAO, 2011; Mardonesa, et al. 2017)



# One Health application - lessons learned from last human rabies cases in Colombia



# Human rabies cases at the interphase rural-urban

**Case 1.** March 2009. Santander de Quilichao, Cauca. Cat contact with children of a public school. Six casualties.

**Case 2.** June 2012. Roldanillo, Valle. Two ladies, 20 and 70 years old.

**Case 3.** February, 2017. Bogota. One woman casualty, bitten by a cat brought from rural area of San Antonio del Tequendama.

All cases were related to the urban -rural interphase, semi-feral cats brought the infection to the urbanized area

Nor the people or the cats were suspected of being affected of rabies ante-mortem. The health authorities said they were winning the battle against rabies

## Rabia en Santander de Quilichao



MINSALUD

Buscar Todo

Mapa del sitio Funcionarios Z

Inicio

Ministerio

Salud

Protección social

Normativa

Servicios al ciudadano

Transparencia

Centro

Contención de brote de rabia humana realizó Minsalud en el municipio de Roldanillo

Ministerio de Salud y Protección Social » Contención de brote de rabia humana realizó Minsalud en el municipio de Roldanillo

03/07/2012

Boletín de Prensa No 164 de 2012

EL TIEMPO

VIDA

CENCIA

EDUCACIÓN

SALUD

VIAJE

MEDIO AMBIENTE

## Muerte de mujer por rabia prende las alertas en el país

La víctima fue mordida por una gata. Virus ha matado a dos personas en 15 meses.

Compartir

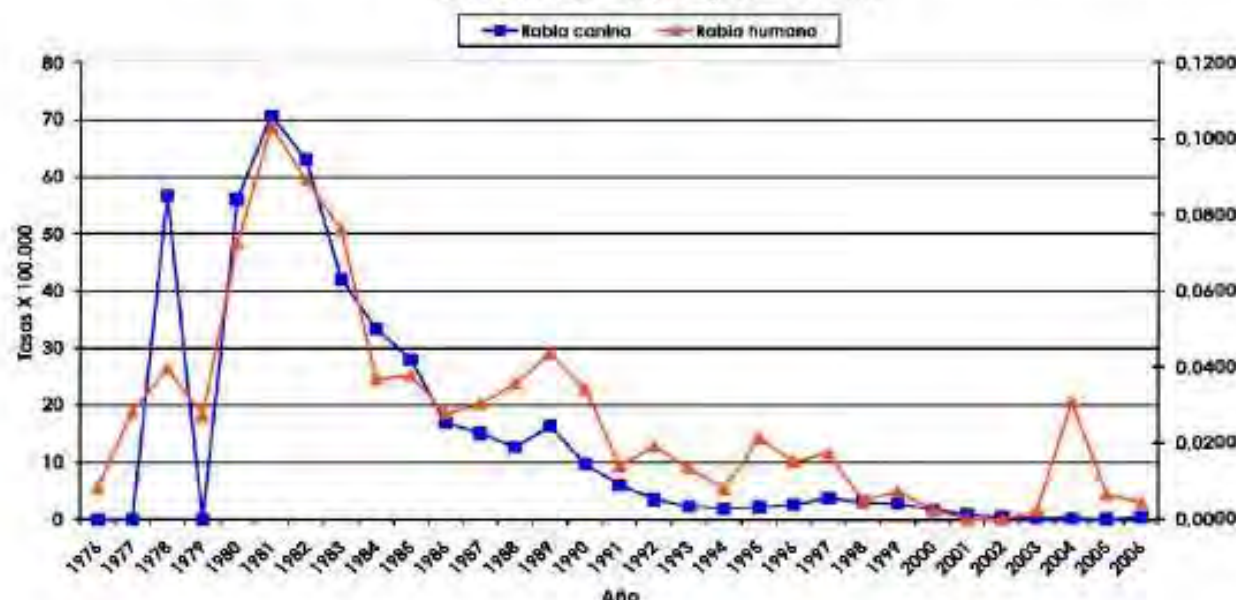
Facebook





# Rabies, Colombia, South america

**Figura 1. Tasas de incidencia de rabia humana y canina en Colombia 1976-2006. Tasas por 100 mil**



(Cediel *et al.*, 2010)

## Clasificación del riesgo de rabia en América



(Dirección de Epidemiología, Buenos Aires, 2017)



# Bovine rabies in Colombia

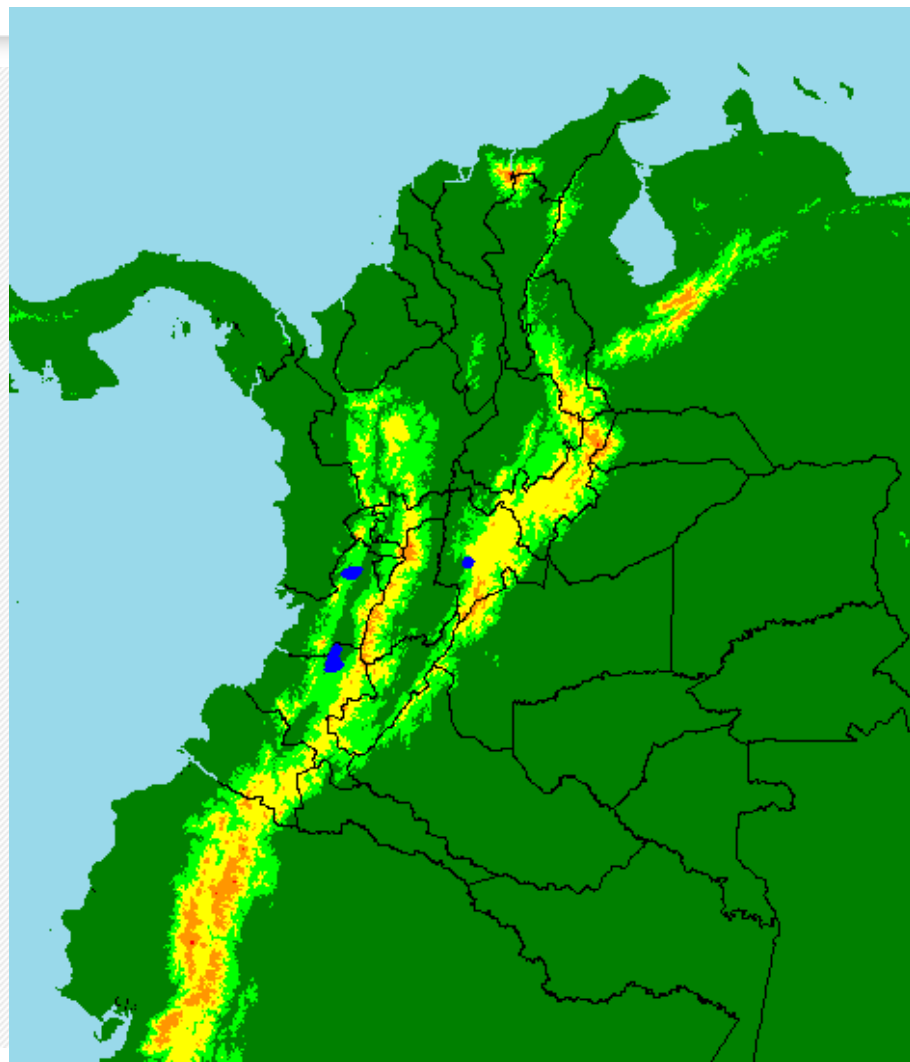


(Marín, Ruiz & Ruiz, 2014)





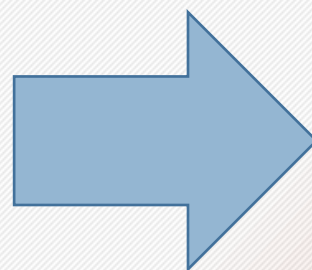
# Rural-urban interphase





# Activities fragmented in 3 different sectors

- Weak of intersectoral coordination between health- agriculture and environmental.
- Rabies transmitted by dog, and attention to exposed people are attended by dependent offices of the Ministry of Health.
- Meantime wild rabies, vector surveillance and control population, falls on the Ministry of Agriculture
- Environment does not monitor wild animals.
- No dialogue among three sectors



**NEED FOR A ONE  
HEALTH APPROACH**





# The Project in Cauca - people leaving the conflict

## Introducción

Desarrollo de actividades en el proyecto (Cauca)

**“Estudio de enfermedades transmitidas por vectores: garrapatas, pulgas, y piojos en zonas priorizadas del departamento del cauca. Acercamiento a la vigilancia y al control”.**



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# Tungiasis and other ectoparasites



(Benavides;2017)



# Survey on One Health activities in Latin american context.

The activity was started in july 2018 and still have 19 responses



# Inter-institutional cooperation

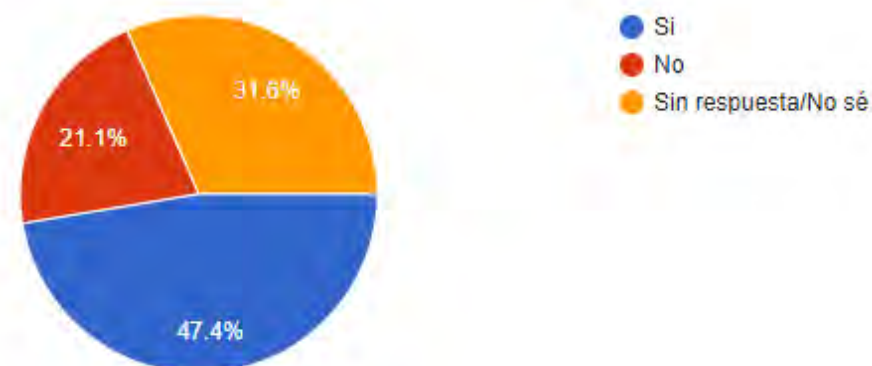
Existe una cooperación activa entre el ministerio de salud y el ministerio responsable de medicina veterinaria cuando se ocupan de las zoonosis?

19 responses



Existe una norma legislativa o regla que regule la colaboración entre los servicios de Salud Pública y Veterinarios (obligación de garantizar un flujo reciproco de información / datos)?

19 responses





# EcoHealth, Colombia - Reflections



- We do not talk too much with each other
- **We do need more...:**
- Integration (horizontal -vertical)
- Data sharing
- Discussion and cooperation between institutions, universities, research groups and stakeholders
- Governance
- Inclusiveness
- Integrate One Health and EcoHealth



# References

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