

Cuban experiences on Disaster Risk Reduction Management (DRRM)

Center of Capacitating for Disaster Reduction in Animals and Plants (CEDESAP-REDesastres)

National Center for Animal and Plant Health (CENSA)

OIE Emergency Management network meeting and OIE Regional workshop on the role of Veterinary Services on Animal Welfare in natural disasters ,
26–28 November 2018



Cuba and the Hurricanes in History



1844 and 1846: Two Great Intensity Hurricanes hit Havana with only an interval of 2 years between them; more than **100 deaths** in each



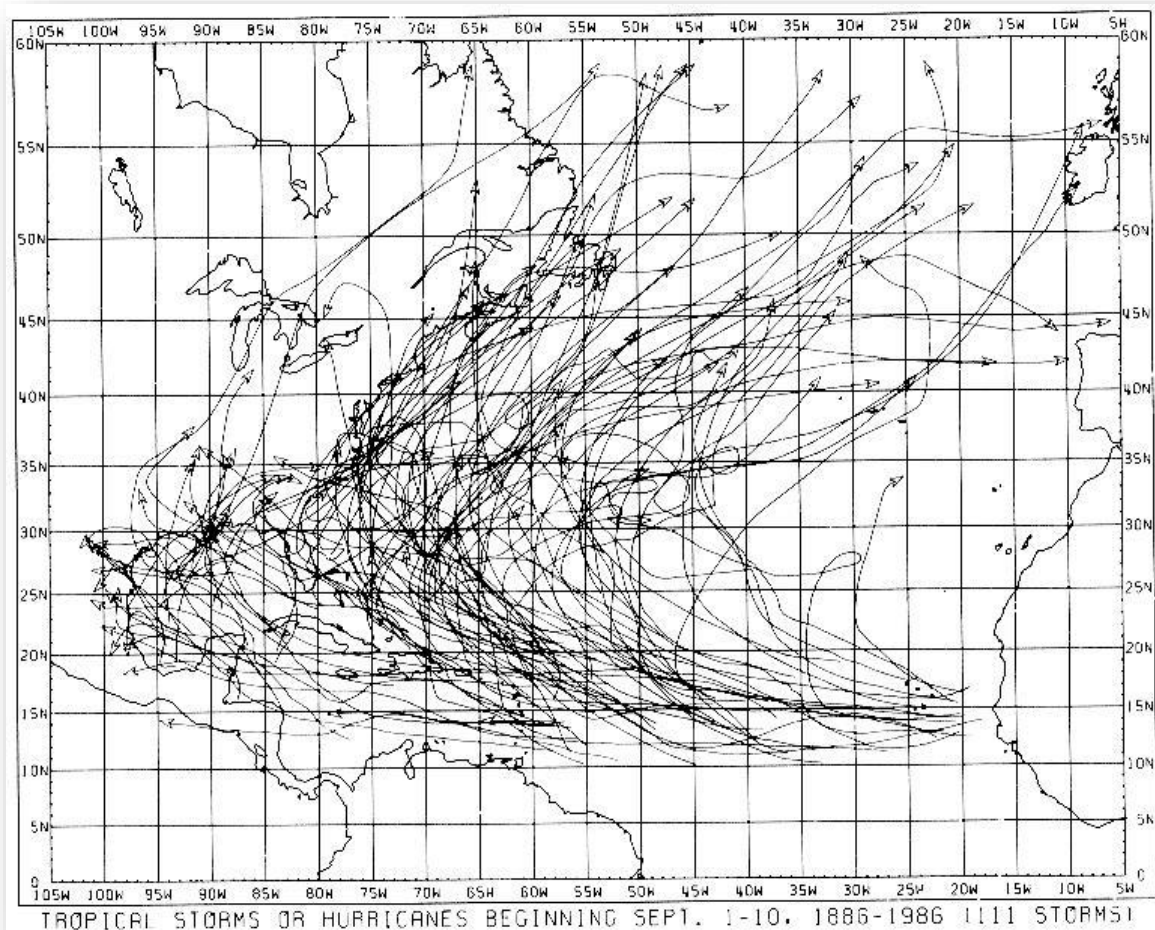
Storm Tide in a High Intensity Hurricane. **Deaths: 3033.**
Sta. Cruz del Sur, Camagúey, **1932**
The entire **population disappeared**
under a Storm of 7 meters high



1963: Flora, Hurricane of Great Intensity; **1159 deaths.** The **Second Major Natural Catastrophe** in Cuba

At present

1995-2017: The highest level of cyclonic activity since 1886. **PERIOD OF HIGH CYCLONIC ACTIVITY OF THE PAST HAS BEEN DUPLICATED PRACTICALLY, INCLUDING MORE THAN 2.5 TIMES THE NUMBER OF HURRICANES OF GREAT INTENSITY**



Rubiera, 2018,
International Disaster
Congress, Havana, Cuba

¿Disaster management (DM) or disaster reduction (DR)?

- The «disaster» is evidence of a poorly managed risk..
- The «disaster management» conduct indirectly to **reactive** approach.
- The «disaster reduction» implies the **corrective and proactive** approach.
- The **disaster situation** occur when the resources of other territories are needed for the response and recuperation activities after an emergency.
- **DM**: The emergency administration receives more attention.
- **DR**: The risk reduction is prioritized for increase the resilience to facing disaster situation.

RESILIENCE: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

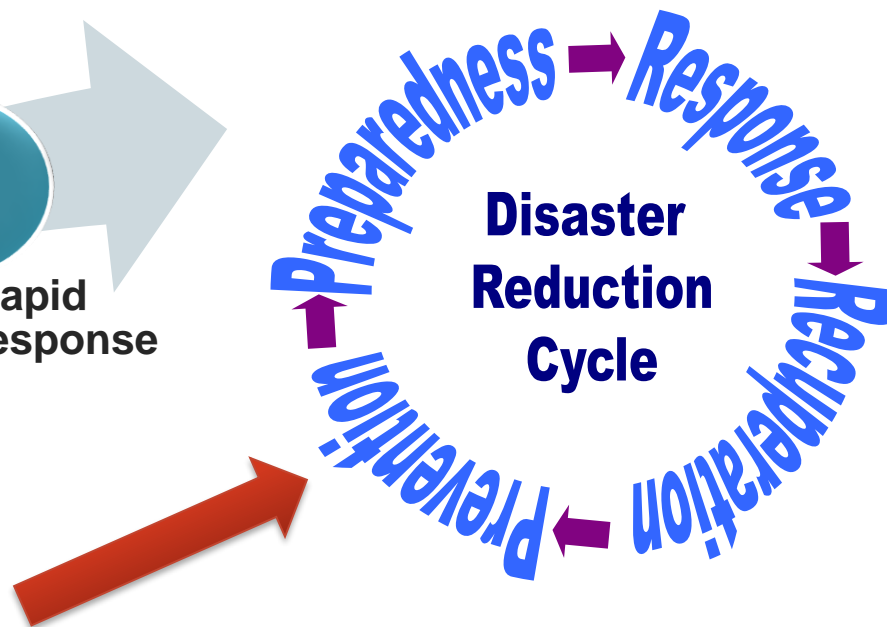
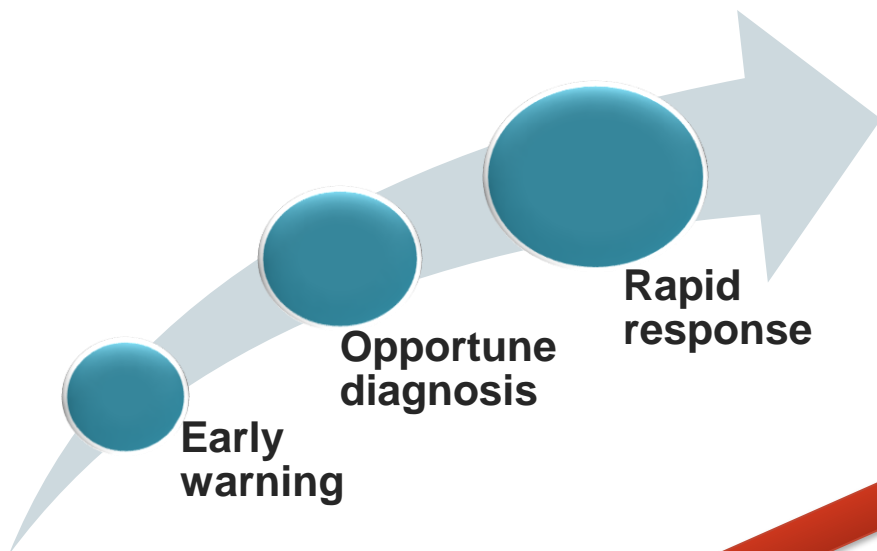


International Strategy for
Disaster Reduction

CHANGE OF STRATEGY



Safeguard the
livelihoods for
improving
resilience at
community level



To increase use of **RISK ASSESSMENT**, **RISK MITIGATION** and **RISK COMMUNICATION** techniques in the field of preparedness and planning of the disaster coping.

DRRM in Cuba: Key aspects

- **Legal basis:** Laws, guidelines and instructions are available.
- **System of Civil Defense:** Based in the **strong cooperation among all sectors** (public, cooperative and private) from the local to national level.
- **Direction:** **Unique chain of command from national to community level.** The **higher political-administrative authority in each territorial level** (nation, province, municipality and popular council) command the **actions in pre and post disaster situation when the respective Defense Council (DC) is activated to confront the threat.** All economy and social actors participate in the DC.
- **Organization:** The head of **each ministry, institution, production or service facilities** has the **highest responsibility of their respective DRRM** plans. They elaborate the specific guidelines and instructions in their respective areas and the annual program of activities to fulfill specific objectives in DRRM is emitted yearly by each one.
- **Control:** The **Civil Defense is in charge of supervision of the DRRM** plans at all levels by regular inspection visits and meetings with respective authorities.

Legal basis of DRRM in Cuba

Law No. 75 of National Defense, Dec. 21, 1994:

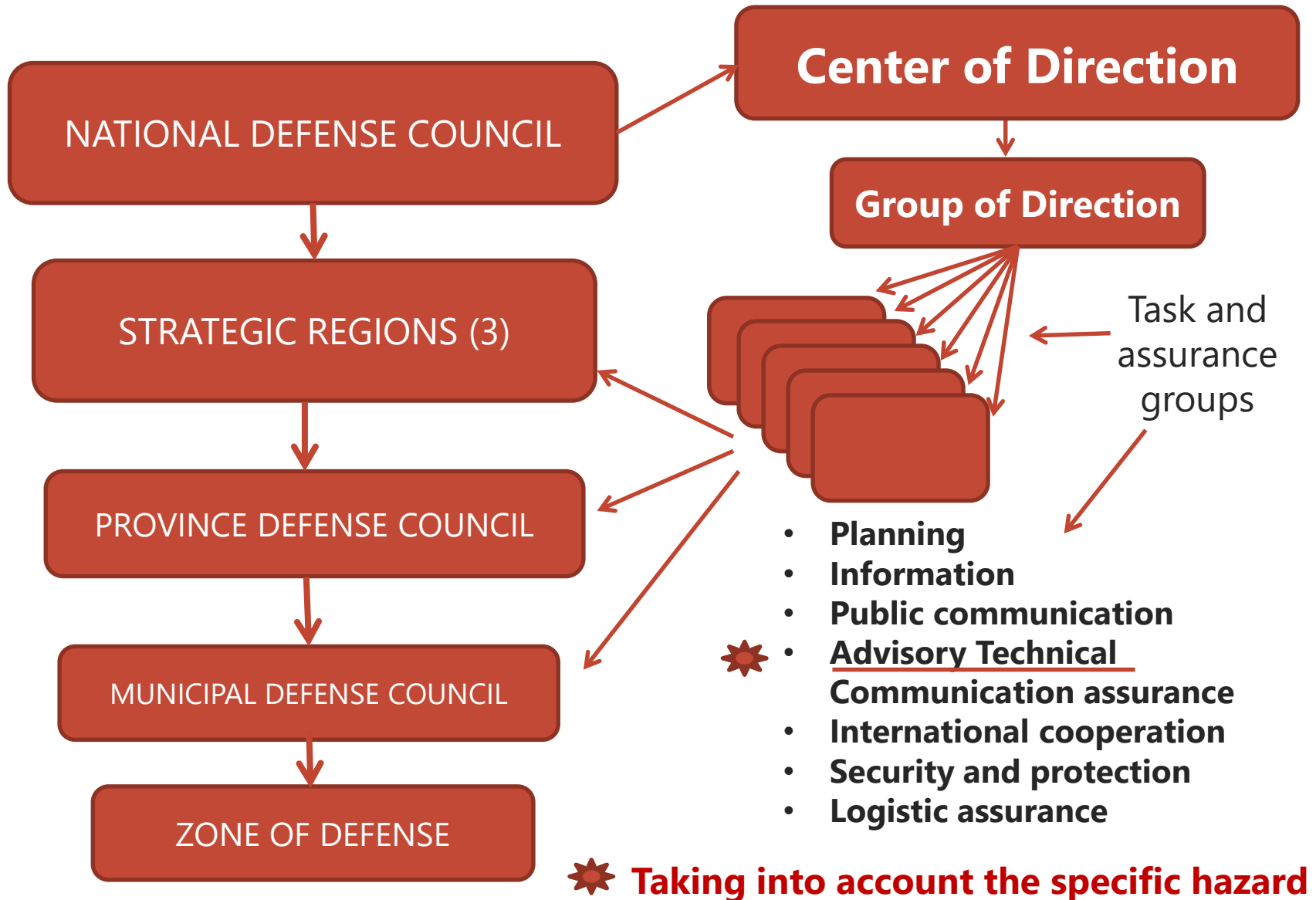
Article 111: “The Civil Defense is a system of defensive measures of a state nature, carried out in time of peace and during exceptional situations, with the purpose of protecting the population and the national economy.....

Law No. 170 : System of Civil Defense, May 8, 1997:

DISASTER REDUCTION

- **Group of preventive, preparation, response and recovery activities** which are taken with the purpose to protect the population, the economy and the environment of the destructive effect disasters.

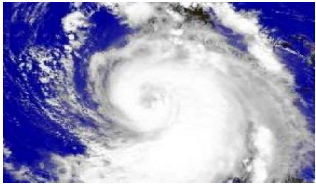
Structure by function of National defense council





Appreciation of disaster perils in Cuba

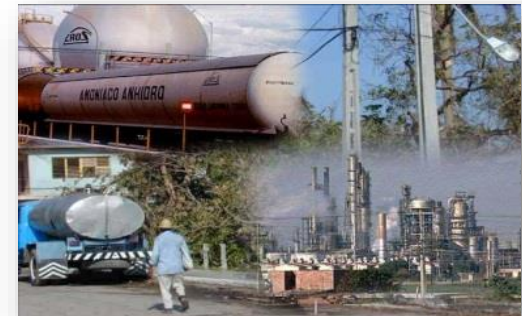
- **Natural:** Hydro-meteorological (tropical cyclone, flooding, local storm, sea penetration), severe drought, fire forest, earthquake, landslide.



- **Sanitary:** Epidemic diseases and plagues in humans, animals and crops.



- **Technological:** Catastrophic transport accident, chemical-toxic accident, oil spill, big fires in industries and social building, collapse of buildings, etc.





Disaster Reduction Plan



**PRIORITY FOR RISK
REDUCTION**

- ▶ The facilities of all sectors (administrative offices, laboratories, industries, farms, slaughterhouses, etc.), should have the respective plan.
- ▶ The objective is to preserve the people and the economy resources, such as the livelihoods, in disaster situations.
- ▶ The goal is to increase the resilience.

RISK

Probability occurrence of the adverse event and the magnitude of its consequences.

$$R = P \times V$$

Peril

Vulnerability

- By each peril of disaster

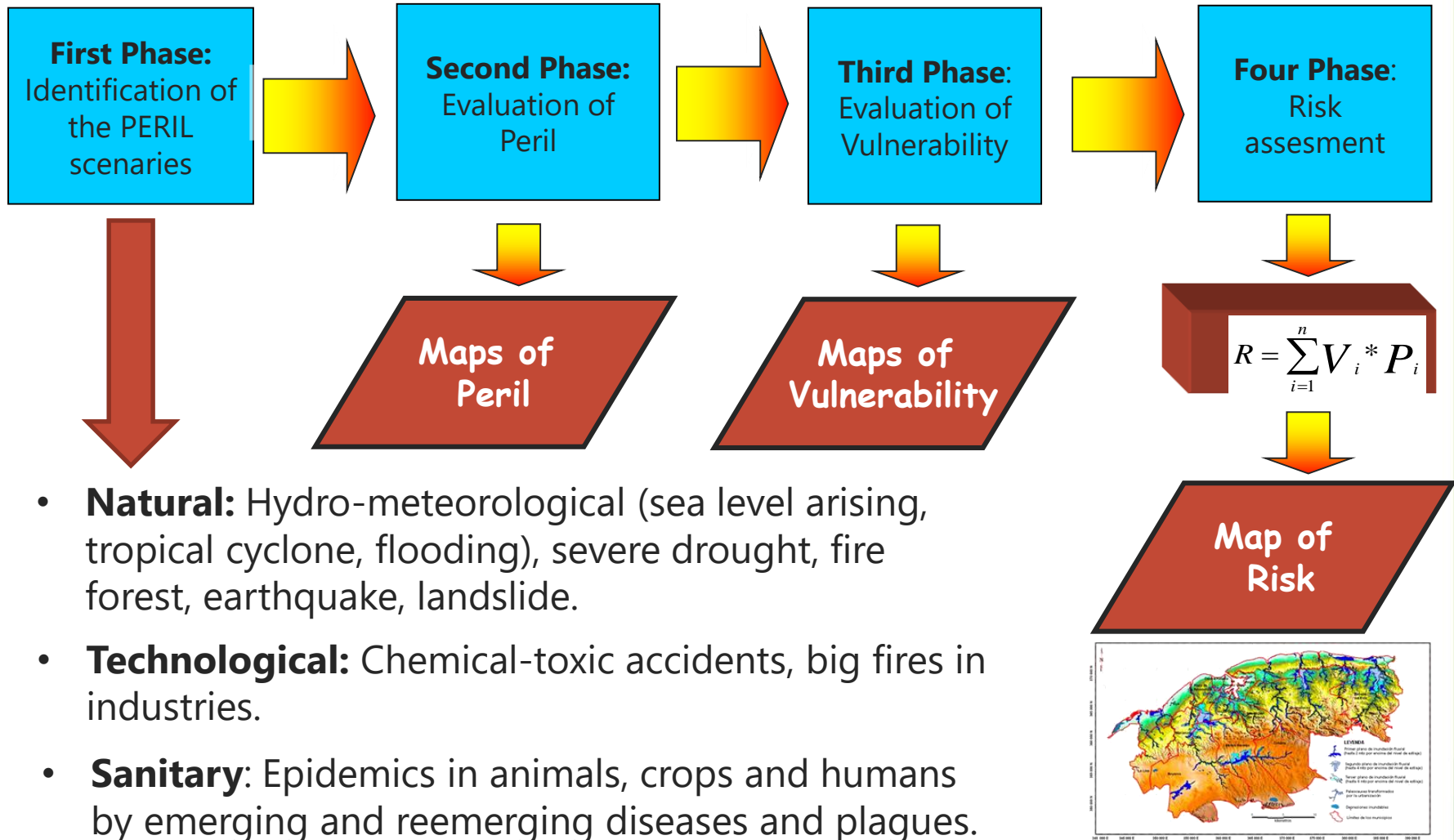
$$\sum V = V_P + V_F + V_S + V_{Ec} + V_{Ecn}$$

TYPES OF VULNERABILITY TAKEN INTO ACCOUNT :

Physic (P: Structural, Non Structural, Functional), Social (S), Ecological (E), Economical (Ecn).



PVR studies: General diagram



Outcomes: Technical informs by each type of peril at province and municipal level and zones highlighted with highest P, V or R. Measures and recommendations for RISK REDUCTION.

State plan against climate change: LIFE Task (Tarea VIDA)

Council of State, April 27, 2017



Actions and projects for the adaptation, legal bases, beach protection, availability and efficient use of water, reforestation, coral barriers protection, territorial planning based in scientific research results, implementation and control measures for climate adaptation in agricultural and health sectors among others, the strengthening of surveillance and early warning systems, education to increase the risk perception, etc.

ALGUNAS DE LAS 11 TAREAS CONTENIDAS EN EL PLAN DE ESTADO



TAREA 1: Identificar y acometer acciones y proyectos de adaptación al cambio climático, de carácter integral y progresivos, necesarios para reducir la vulnerabilidad existente en las 15 zonas identificadas como prioritizadas, considerando en el orden de actuación a la población amenazada, su seguridad física y alimentaria y el desarrollo del turismo.



TAREA 2: Implementar las normas jurídicas necesarias para respaldar la ejecución del Plan de Estado, así como asegurar su estricto cumplimiento, con particular atención en las medidas encaminadas a reducir la vulnerabilidad del patrimonio construido, priorizando los asentamientos costeros amenazados.



TAREA 3: Conservar, mantener y recuperar integralmente las playas arenosas del archipiélago cubano, priorizando las urbanizadas de uso turístico y reduciendo la vulnerabilidad estructural del patrimonio construido.



TAREA 4: Asegurar la disponibilidad y uso eficiente del agua como parte del enfrentamiento a la sequía, a partir de la aplicación de tecnologías para el ahorro y la satisfacción de las demandas locales. Elevar la infraestructura hidráulica y su mantenimiento, así como la introducción de acciones para la medición de la eficiencia y productividad del agua.



TAREA 5: Dirigir la reforestación hacia la máxima protección de los suelos y las aguas en cantidad y calidad, así como la recuperación de los manglares más afectados. Priorizar los embalses, canales, y franjas hidrorreguladoras de las cuencas tributarias de las principales bahías y de las costas de la plataforma insular.



TAREA 6: Detener el deterioro, rehabilitar y conservar los arrecifes de coral en todo el archipiélago, con prioridad en las crestas que bordean la plataforma insular y protegen playas urbanizadas de uso turístico. Evitar la sobrepesca de peces que favorecen a los corales.



TAREA 7: Mantener e introducir en los planes de ordenamiento territorial y urbano los resultados del Macroproyecto sobre Peligros y Vulnerabilidad de la Zona Costera 2050-2100, así como los Estudios de Peligro, Vulnerabilidad y Riesgos en el ciclo de reducción de desastres. Emplear esta información como alerta temprana para la toma de decisiones.



TAREA 8: Implementar y controlar las medidas de adaptación y mitigación al cambio climático, derivadas de las políticas sectoriales en los programas, planes y proyectos vinculados a la seguridad alimentaria, la energía renovable, la eficiencia energética, el ordenamiento territorial y urbano, la pesca, agropecuaria, la salud, el turismo, la construcción, el transporte, la industria y el manejo integral de los bosques.



TAREA 9: Fortalecer los sistemas de monitoreo, vigilancia y alerta temprana para evaluar sistemáticamente el estado y la calidad de la zona costera, el agua, la sequía, el bosque, la salud humana y vegetal.



TAREA 10: Priorizar las medidas y acciones para elevar la percepción del riesgo y aumentar el nivel de conocimiento y el grado de participación de toda la población en el enfrentamiento al cambio climático y una cultura que fomente el ahorro del agua.



TAREA 11: Gestionar y utilizar los recursos financieros internacionales disponibles, tanto los provenientes de fondos climáticos globales y regionales, como los de fuentes bilaterales, para ejecutar las inversiones, proyectos y acciones que se derivan de cada una de las tareas de este plan de Estado.

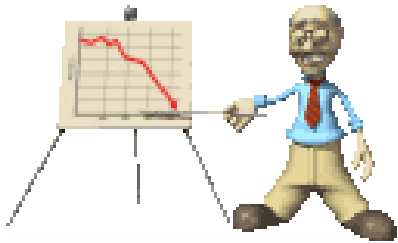
Veterinary services: Prevention/Mitigation and Preparedness

- To engage with other social actors in the national platform for DRRM.
- Elaborate the general plan for DRR taking into account all perils identified in each territory and financial and material resources needed. The systematic activities to reduce vulnerability is a priority.
- Strengthen the capabilities for early warning through the surveillance system and rapid diagnosis. ★
- Guarantee the animal welfare with a good practices, the biosecurity in animal production systems, animal industries, laboratories, etc.
- Contributes with the personnel sanitary protection specially whom dealing with zoonotic risks. ★
- Strengthen diagnostic capacity. To be prepared against the main exotic diseases and elaborate the respective emergency programs. ★
- Identification the animals and other resources to be evacuated in areas with flooding risk. Guarantee food and medicines.

★ Coordination with Public Health system

Veterinary services: Response and Recovery

Assessment of losses and needs. Identify priorities.



Disasters and veterinary services: Challenges

- The VS should **participate in the national platform for DMRR** and to engage with economic sectors and social actors at all levels.
- The **VS** should have the **own DDRM plan**
- .
- The **DMRR should be considered transversally** in many areas: diagnostic, surveillance, biosecurity (in labs, farms and food production chain), animal welfare, veterinary public health activities.
- **Risk assessment, risk management and risk communication need to be applied for DRR.** It should **contribute to prioritize** the public investments for DRR activities and support the making-decision process with stakeholders.
- The **training of veterinarians in DRRM**, from the risk analysis to response actions, have a paramount importance to cope with future disasters and climate change.
- The **DMRR strategy in agricultural sector** must to be linked with the country development planning. **It contributes to the protection** of livelihoods and the public health by the food quality and quantity food and against the zoonoses.

Remember this tips.....

- The improvisation is the major enemy in case of disaster situation.
- Each facility (laboratory, clinic, industry, farms, etc.) needs a particular DRRM plan.
- The availability of a proper plan and its frequent updating is needed.
- The disasters affect the countries development, but they should be taken as a development opportunity. The vulnerabilities observed should be solve as soon as possible. The lessons learnt are very important; the mistakes can't repeat.
- The agriculture sector needs to increase the resilience through its vulnerability reduction because it is key for the sustainability.

Conclusions

- The Cuban veterinary services are joined with other social actors in the national disaster risk reduction and management strategy to dealing with different disaster perils.
- The VS engagement in Disaster Reduction Cycle is essential for facing the challenges of disaster situation increasing and climate change upon welfare and animal health in order to contribute with the sustainability of the agriculture sector and the public health with ONE HEALTH approach.

“To see later is worthless; what is worth is to see before.....and to be prepared.”

José Martí

“Ver después no vale; lo que vale es ver antes y estar preparados.”

José Martí

