

# UNITED NATIONS/ARGENTINA WORKSHOP on the Applications of GNSS

La Falda del Carmen, Córdoba  
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## PARAGUAY



Hebe Romero

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- Aerospace Research Center of Paraguay (CIAP).
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- The book launching on Space Legislation, the first of its kind in Paraguay, its development. (Law Space).
- GNSS/National Regulations.
- GNSS applications in Paraguay.

# ○ A Historical Review– “MUJER PARAGUAYA”



**Women in Paraguay took an important role during and after the War of the Triple Alliance, first as Resistance or «Residentas», later as Rebuilders or «Reconstructoras»**





- In February 22<sup>nd</sup>, 1868, the citizens of Asunción was subjected to a very drastic executive order:

*“Due to the state of war that our republic is being subjected to and, for the sake of the defense of our liberty and independence, it is mandatory to evacuate the capital city as one of the lead point to be unoccupied.”*



“Residentas” getting out from a church in Villarrica

When evacuation order came, each “Residenta” was assigned to reside to a specific location in Paraguay.

When enemy repression was more violent, residence locations were moved towards north, they eventually reached Cerro Cora and its surroundings.

This is why to all these pilgrims they were called **«Residentas»**, they weren't notified ahead of their destinations, or what they called as their “residence.”





- Towards the end of the great war, Paraguay was facing difficult times as skilled men were killed in combat. Only senior citizens, children and women remained on the land.
- **It was during that time women in Paraguay took leadership, since all men were sacrificed for the nation, women were forced to leave their homes, abandoning all their belongings to the foreign forces.**
- Once war was ended, they were the «**Rebuilders**» of Paraguay. Each Paraguayan women has to play the role of mother and father; teacher and educator; in addition to this, they were the ones who worked the land, founded schools and asylums; and responsible to reestablish the nations economy.



**AEROSPACE RESEARCH CENTER  
OF PARAGUAY (CIAP)**

- The Centre was founded in 2011 by graduates of the Ninth Class of the Post Grade Studies on Air and Space Policy and Strategy, they are from the Command of Aeronautical Institute. Also, the founding involved instructors and professors of the above mentioned institution.
- CIAP is a civil entity, it has the purpose of promoting study and knowledge by spreading and improving of the juridical normative, the policies applicable to civil and military aeronautics, the activities relating to air transport, including environmental impact and climate change, among others.
- CIAP is a non-profit institution of scientific-academic nature and, it services the society, integrated by civil and military specialists in the field.
- To fulfill its ends the Centre carries out, among others, the following activities:

***“The promotion of research, knowledge, spread and improvement of legislation, aeronautics and aerospace policies and specific aspects of national and international interest, including environmental impact and climate change”.***

# The Creation of AEP

## AGENCIA ESPACIAL DEL PARAGUAY



MARTES 19 DE FEBRERO DE 2013 | 15:56

# Ministra quiere lanzar satélite para “control” aeroespacial

Hoy

+1

Me gusta 27

La Ministra de Defensa Nacional, María Liz García de Arnold, indicó que el Estado busca lanzar un satélite que permita el control del espacio aéreo nacional. Actualmente nuestro país esta prácticamente “ciego” con respecto a las aeronaves que ingresan al país. El satélite permitiría el control del espacio aéreo, terrestre y fluvial.

La Ministra indicó que presentó un proyecto para crear una agencia nacional de control aeroespacial como primera medida para impulsar políticas y programas aeroespaciales. “Para iniciar este proceso se debe crear la institución, reglamentar su funcionamiento y establecer los procesos para lanzar un satélite que controle nuestro espacio”.

“Los controles del nuestro territorio, abarcan el suelo, agua y el espacio aéreo. Todo ese espacio está sin control. Tomando el aspecto de vigilancia y control del espacio aéreo, se presentó un proyecto para crear una agencia autárquica, con derecho público para desarrollar políticas y programas aéreos espaciales que tiene que ver con la defensa nacional”, explicó la Ministra de defensa.


La Ministra de Defensa indicó que una política bien establecida permitirá el control satelital, desarrollo económico y científico. “Los aspectos que vamos a mejorar con esto son la comunicación, vigilancia e información; esa es parte de una iniciativa que conlleva al control de nuestra soberanía”.

De no contar con un satélite a corto plazo, el Estado podría alquilar módulos espaciales. “Si nosotros tuviéramos alquilados o comprado el modulo de comunicación, las empresas de telefonía estaría utilizando el modulo comunicacional y no tendría que salir a través de un medio extranjero”, ejemplificó García de Arnold en una nota a la 970 AM.

El proyecto contempla el lanzamiento de un satélite en los próximos cinco años, mínimamente. En este proyecto están involucrados el Ministro de Defensa, el Consejo Nacional de Ciencias y Tecnología y las comisión de Ciencia y Tecnología del Congreso Nacional.



Paraguay busca lanzar satélites para control del espacio aéreo nacional

The background of the slide is a composite image. The lower portion shows the Earth from space, with a vibrant blue atmosphere and white, wispy clouds. The upper portion is a deep black space, featuring a large, detailed view of the Moon's surface with its characteristic craters and maria. The text is overlaid on the right side of the image.

**In 2013, the first women to be appointed as minister of defense in Paraguay, took the initiative to propose the creation of the Paraguayan Space Agency.**

# SPACE FOR WOMEN







# **World Space Activity Governance**

**Institutional frame includes:**

- United Nations Treaties and Principles on ultraterrestrial space;**
- approved assignments by the commission; and,**
- General Assembly approved resolutions on space.**

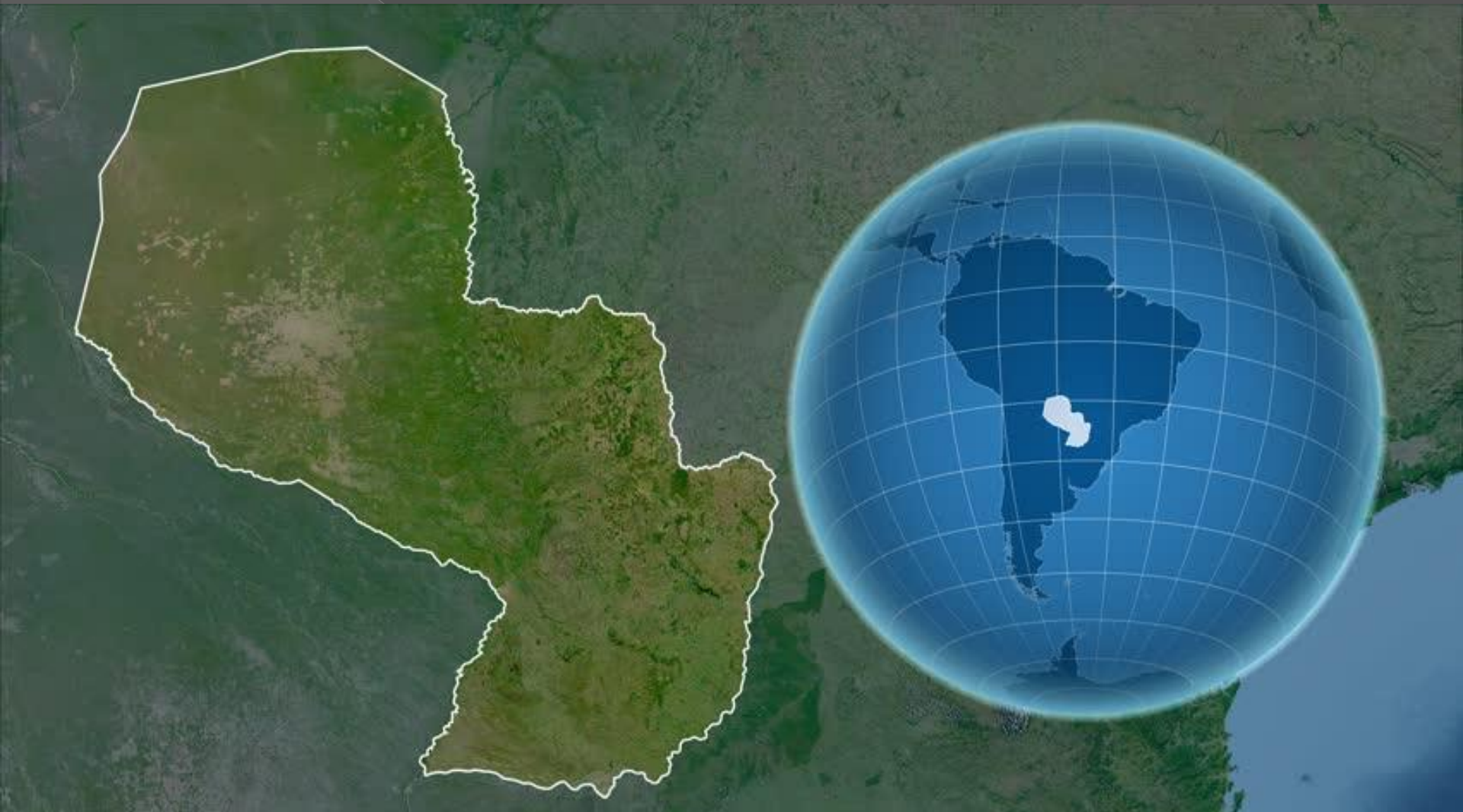
**As well as supporting activities nationwide, regional and worldwide (including the ones conducted by the United Nations and international entities related to space)**

To develop the base for “Women Inclusion” supporting the application of UNISPACE +50, this the priority theme on “Creating the Capacity for the XXI century,” as well as to face SDG5.





# PARAGUAYAN SPACE AGENCY (AEP – AGENCIA ESPACIAL DEL PARAGUAY)





# PARAGUAYAN SPACE AGENCY



## The Purpose

### Main Objective

**To promote and develop national space activities, supporting innovation by pacific means.**

### Specific Objectives

- To carry out research work looking to access space technology and applications by developing highly skilled groups in this field.
- To propose policies on development, use and exploitation of space in a peaceful manner. This is to ensure the accomplishment of treaties and international agreements.
- To promote the creation of human recourses in this filed.

These objectives are in tune with the Government's National Plan of Development also known as 2030 Paraguay Vision.

One of the strategic action plan is the "Insertion of Paraguay in the World."



# SPACE AGENCY OF PARAGUAY



## Brief Timeline

2014  
March

Congress passed the law on the creation of the Paraguayan Space Agency. Law 5151/14.  
This agency will be under the administration of the president of Paraguay.

2016  
November

SE APRUEBA EL TRATADO DEL ESPACIO DE 1967, LEY No. 5740

2016  
December

Executive order (Act 6466/17) appointed Liduvino Vielman Díaz as its first president. From here, operation of this agency began.

2017  
July

Executive order (Act 7364/17) established the external advisory board. There are 12 members in total, from public to private institutions.



# SPACE AGENCY OF PARAGUAY



## Agency Organizational Chart

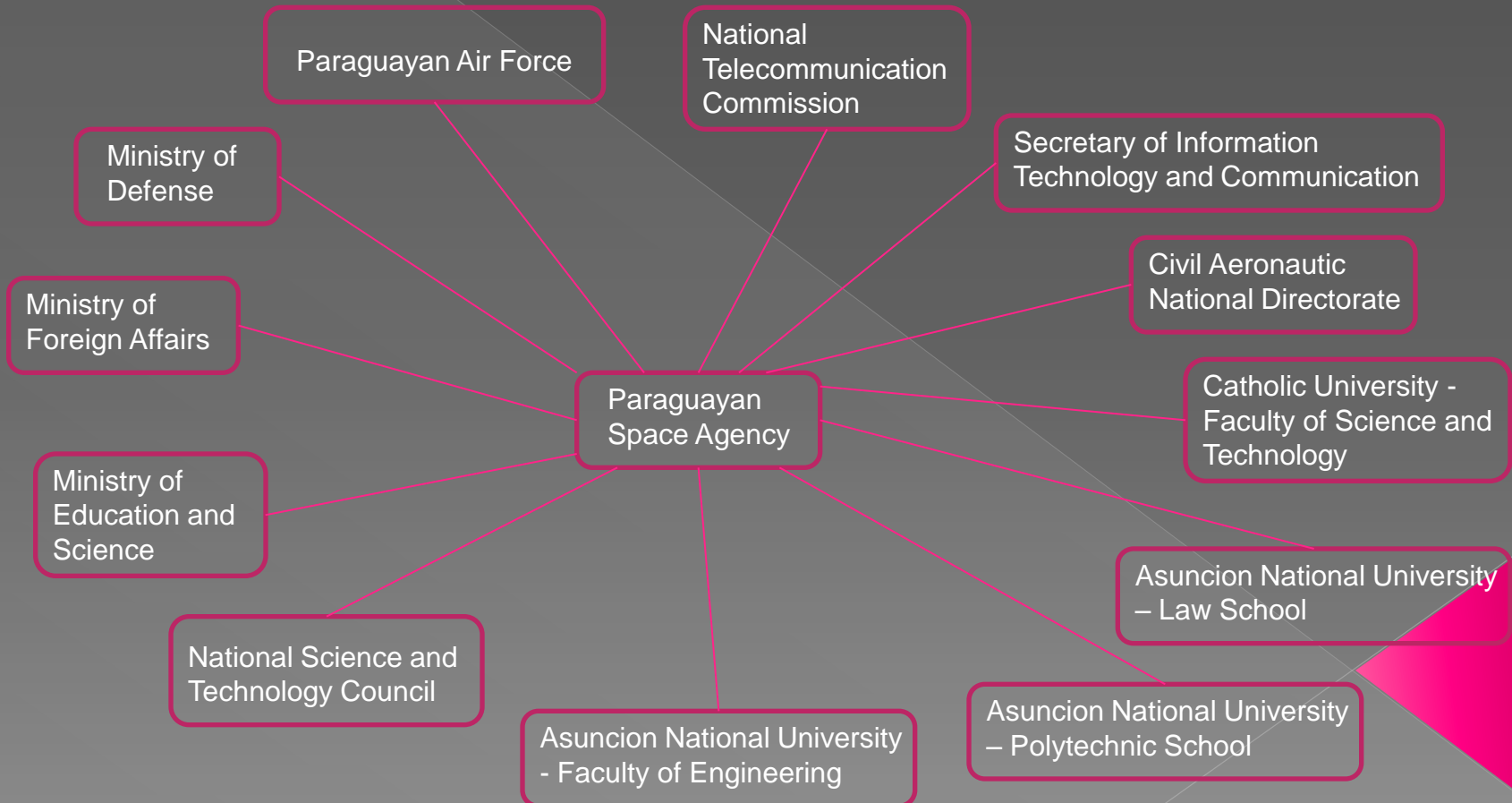




# SPACE AGENCY OF PARAGUAY



## External Advisory Board

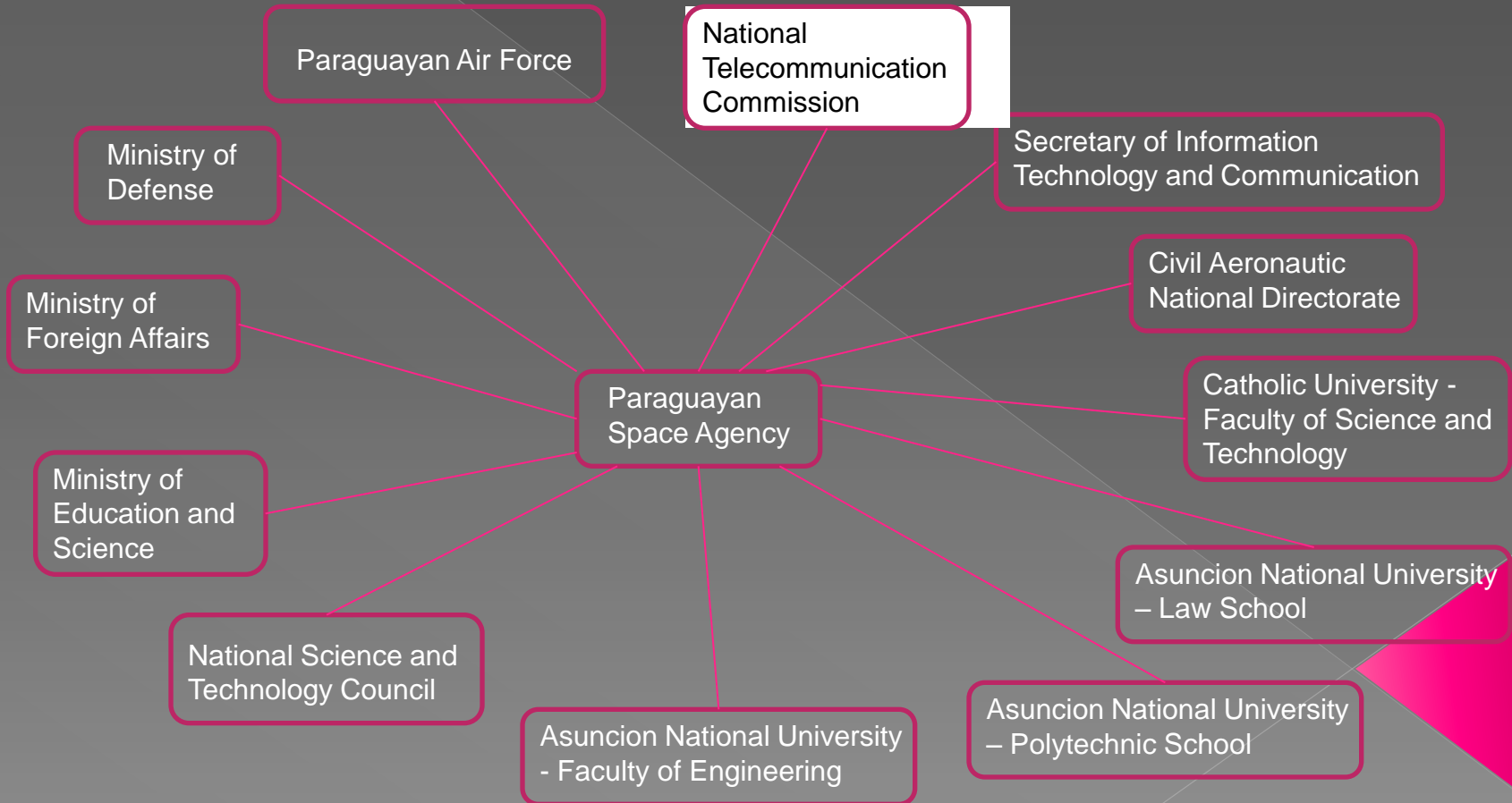




# SPACE AGENCY OF PARAGUAY



## External Advisory Board







## CONATEL – LAW 642/1995

is the telecommunications regulator and representative of Paraguay before the ITU.

[www.conatel.gov.py](http://www.conatel.gov.py)

CONATEL - CITEL



# CONATEL

REGULATION – FIXED SERVICE SATELLITE  
(SFP)

NATIONAL FREQUENCY ALLOCATION PLAN  
(PNAF) – Act 14135/96



# CONATEL

Reserve the Broadcasting Service  
in Region 2 (Americas) of the  
Radio Regulations in the band  
470 to 698 MHz



CONATEL

# GNSS applications in Paraguay



## ***GNSS – PBN***

### **SGAS**

**RNAV (GNSS) RWY 02**

**RNAV (GNSS) RWY 20**

### **SGES**

**RNAV (GNSS) RWY 05**

**RNAV (GNSS) RWY 23**

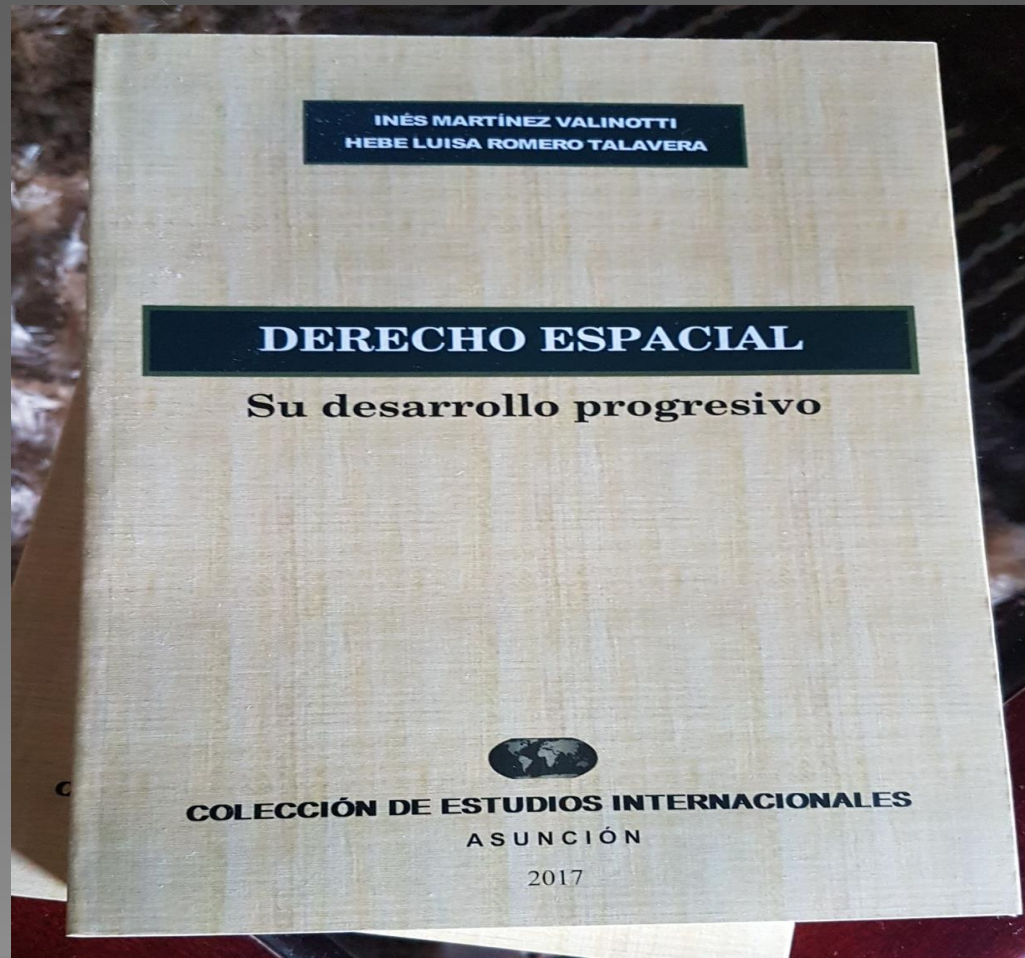
### **SGME**

**RNAV (GNSS) RWY 01**

**RNAV (GNSS) RWY 19**

The book launching on Space Legislation, the first of its kind in Paraguay, its development. (Law Space).

INES MARTINEZ - HEBE ROMERO





**Thank you!**

**Aguije**

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