

National Forests and Climate Change Strategy of Chile

Informal presentation to the Emission Reduction Program under the FCPF Carbon Fund



CONAF
Ministerio de
Agricultura

Gobierno de Chile

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Structure of the presentation



1. Context of Chile's forestry sector
2. Institutional arrangements
3. Technical-Operational aspects of the Strategy
4. Links of the Strategy with NAMA and FCPF
5. Proposal to the Carbon Fund
6. Final Considerations

Chile and its forests (promotion and norms)

Decree Law N°701 of 1974 on forest promotion

PLANTATIONS *Eucalyptus globulus*, Region X

Regulate the forestry activity on soils preferentially suited for forestry and on degraded soils. Also encourage afforestation activities, particularly on the part of small-scale forest owners, and also those necessary for prevention of degradation of soils in the national territory as well as for their protection and recovery.

Period	Annual Afforestation Rate (ha/year)	Instrument	Planted Area end period (ha)	Objectives
1885-1930	150	None existed	15.000	Protection
1931-1974	16.000	Forest Law	580.000	Economic
1975-1997	65.000	DL 701	1.850.000	Industrial support
1998-2010	38.000	Law 19.561	2.620.486	Small-scale owners and soil protection

Law N°20.283 on Recovery of Native Forest and Forest Promotion (July 2, 2008)

NATIVE FOREST *Nothofagus pumilio* (Lenga), Region XI

The objectives of this law are the protection, recovery and improvement of the native forests, for the purpose of ensuring forest sustainability and the environmental policy

Achievements to date of the Native Forest Law (2008-2012):

95.308
hectares

4.971
beneficiaries

72 projects for a total
sum of **US\$4,6**
million in
research

US\$ 27.296.716
in incentives

There is still a great deal of work to be done... soils fit for afforestation



REGION	Productive Environmental Purposes	Environmental Purposes	TOTAL Area (ha)
Arica & Parinacota		400	400
Tarapacá		2.100	2.100
Antofagasta		4.900	4.900
Atacama		2.031	2.031
Coquimbo		298.500	298.500
Valparaíso		57.800	57.800
Metropolitan Region		68.000	68.000
O'Higgins	49.359	1.500	50.859
Maule	162.354	2.200	164.554
Bio Bio	465.601	48.400	514.001
Araucanía	168.690	1.000	169.690
Los Ríos	44.920	3.000	47.920
Los Lagos	274.428	2.300	276.728
Aysén	423.734	4.300	428.034
Magallanes		204.000	204.000
TOTAL	1.589.086	700.431	2.289.517



Source: CONAF (2012).



There is still a great deal of work to be done... native forest fit to be managed



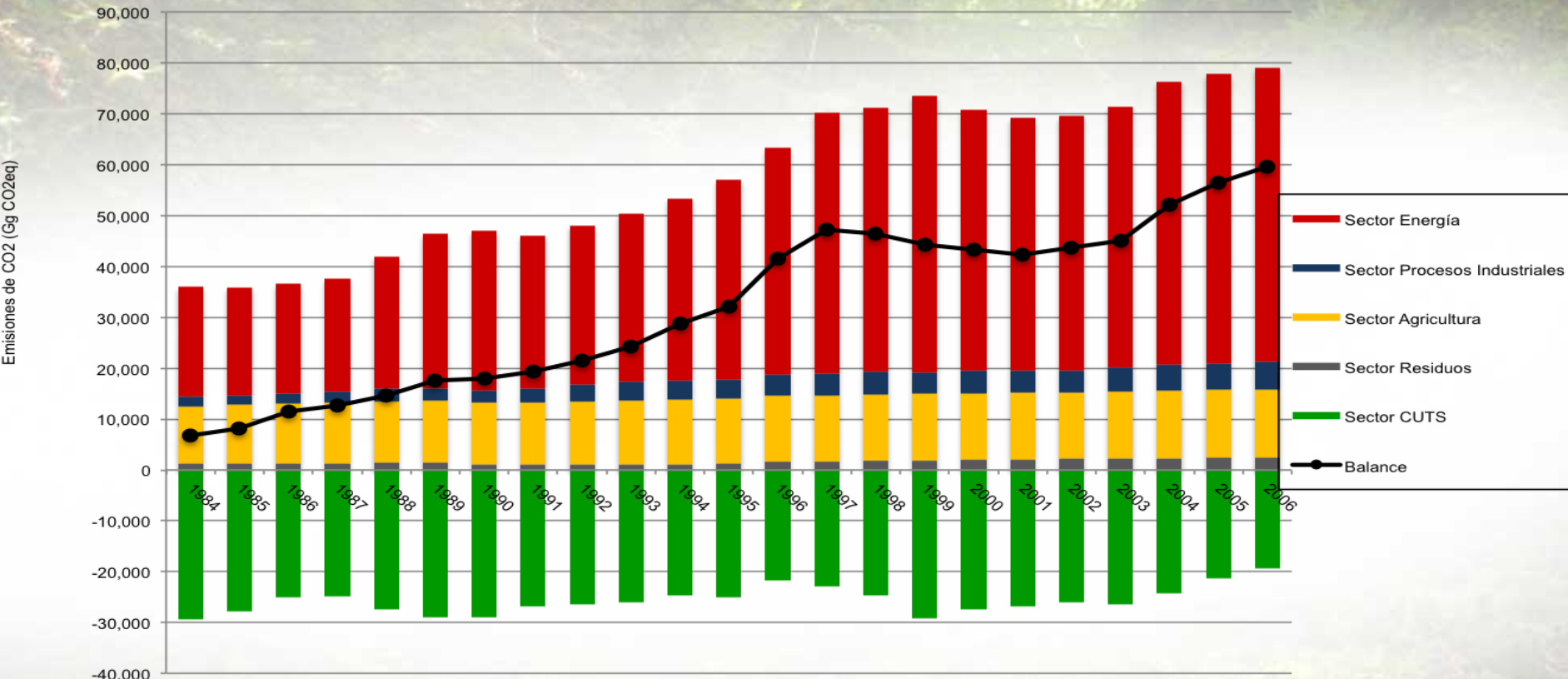
Regions	Total
Coquimbo	29.087,8
Valparaiso	26.113,1
O'Higgins	39.972,7
Maule	340.780,3
Bio-Bio	409.741,9
Araucanía	555.720,7
Los Lagos	107.349,9
Aysén	1.914.274,6
Magallanes	1.163.441,8
Metropolitan	2.340,7
Los Ríos	509.563,7
Total	6.064.536,3



Source: CONAF & Universidad Austral de Chile (2012).



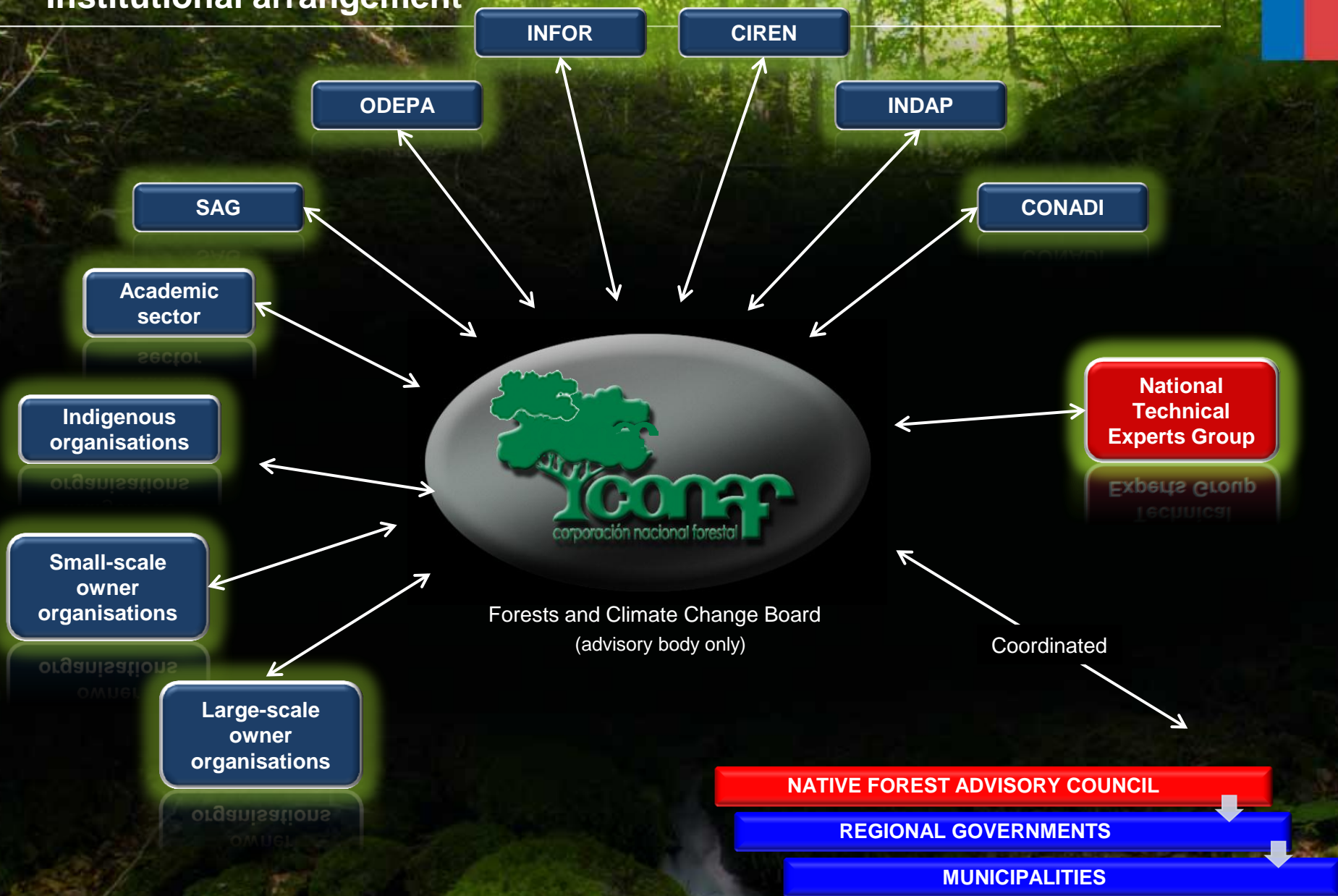
Chile and its forests



Inventory of Greenhouse Gases: emissions and captures (Chile's Second National Communication 2011)



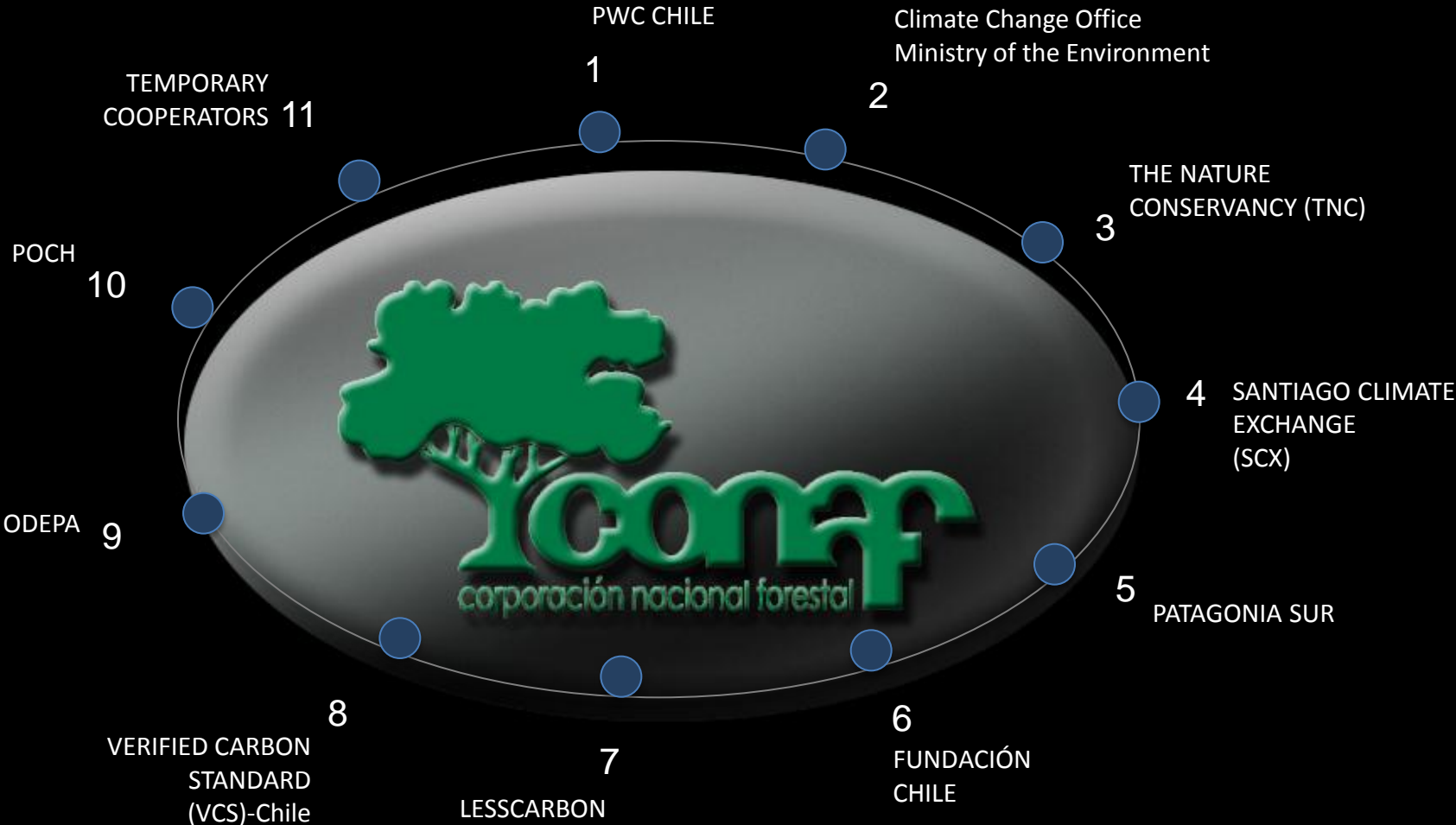
Institutional arrangement



Institutional arrangements

National Technical Experts Group (GTNE)

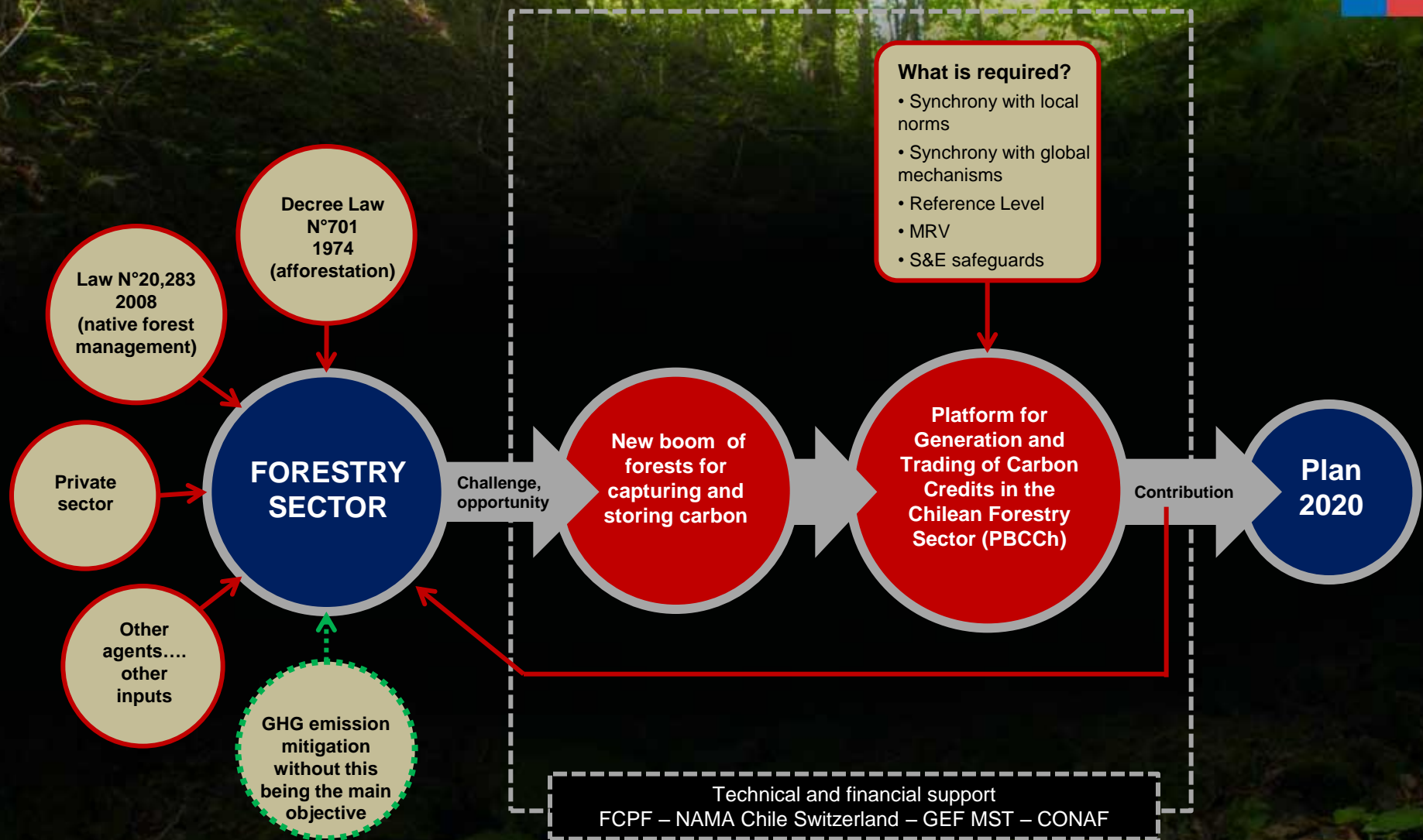
(advisory body only)



Stakeholders involved



Forests and Climate Change Strategy



Typologies concept



QUERIES TO BE ANSWERED IN THE DEFINITION OF FOREST CARBON PROJECT TYPOLOGIES

What are the reference levels of each typology?

Forage Plantation
(Region IV)



Arid-zone species
plantation (Regions XV-I-II)

What social and environmental impacts (intentional or otherwise) could be caused by each project type?

Mediterranean Forest
Enrichment
(Regions IV- VI)



Degraded Native
Forest Enrichment
(Regions VIII-X)



Alerce
Conservation
(Region X)



Afforestation
Patagonia
(Regions XI-XII)

Which are the silvicultural activities or technical prescriptions that can be carried out?

What kind of monitoring will there be?

PMP Plantations
(Regions V-IX)

How to deal with the non-permanence of carbon (buffer)?

Second-growth
Management
(Regions VIII-X)

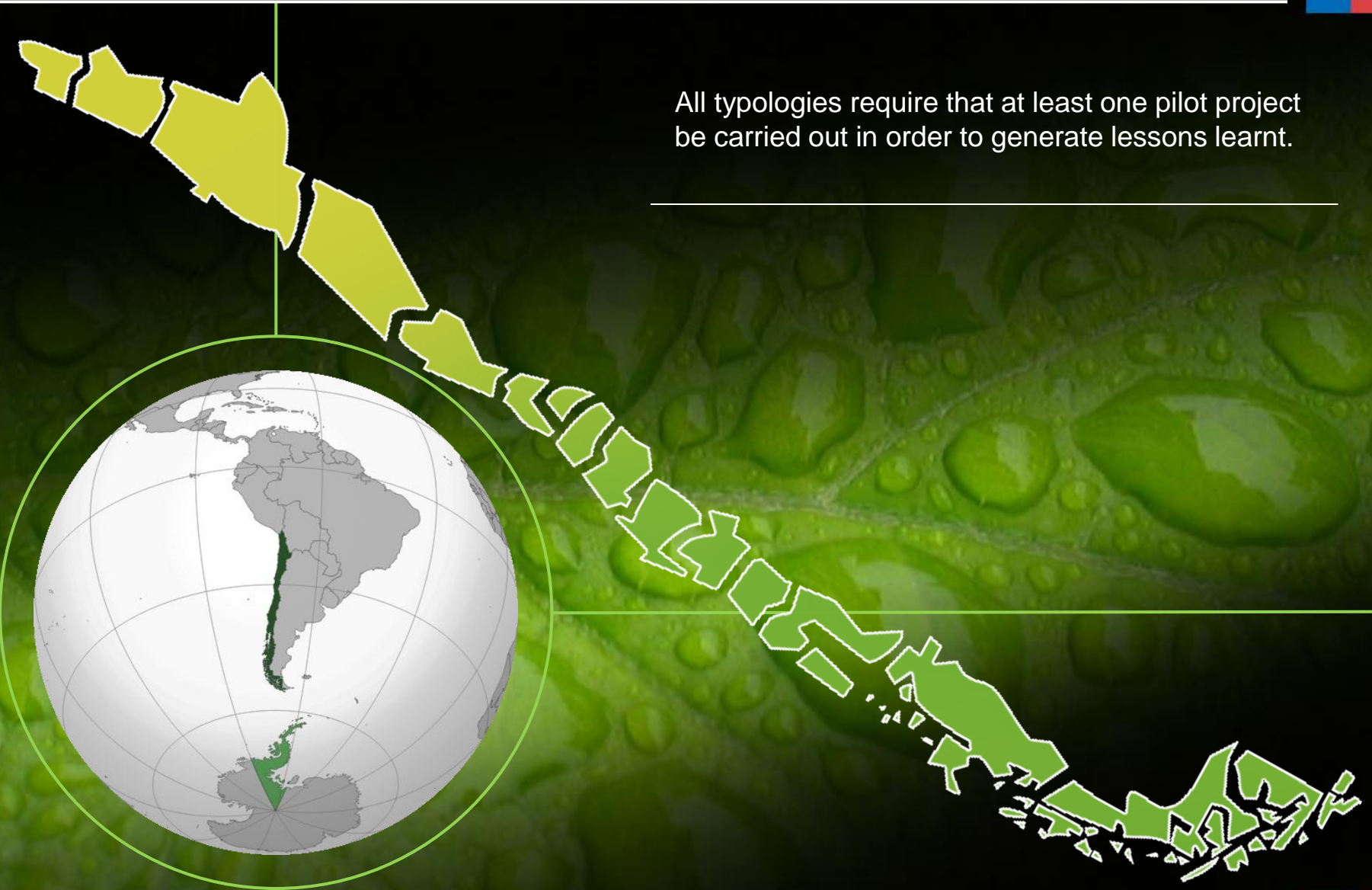
How do I prove
additionality?

Under what soil, climate and plant-cover condiciones (type of forest) will the project take place?

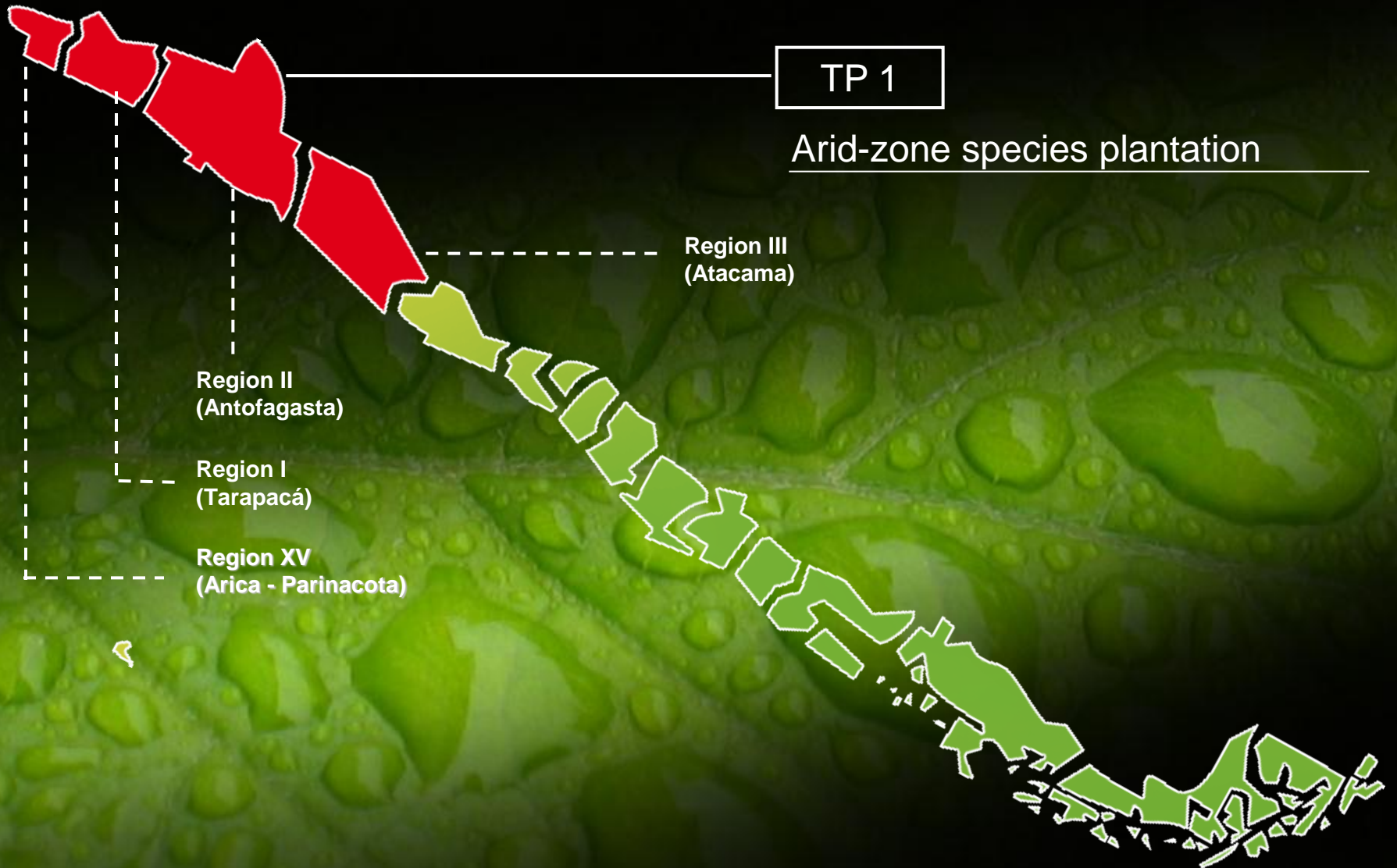


Progress to date in development of typologies

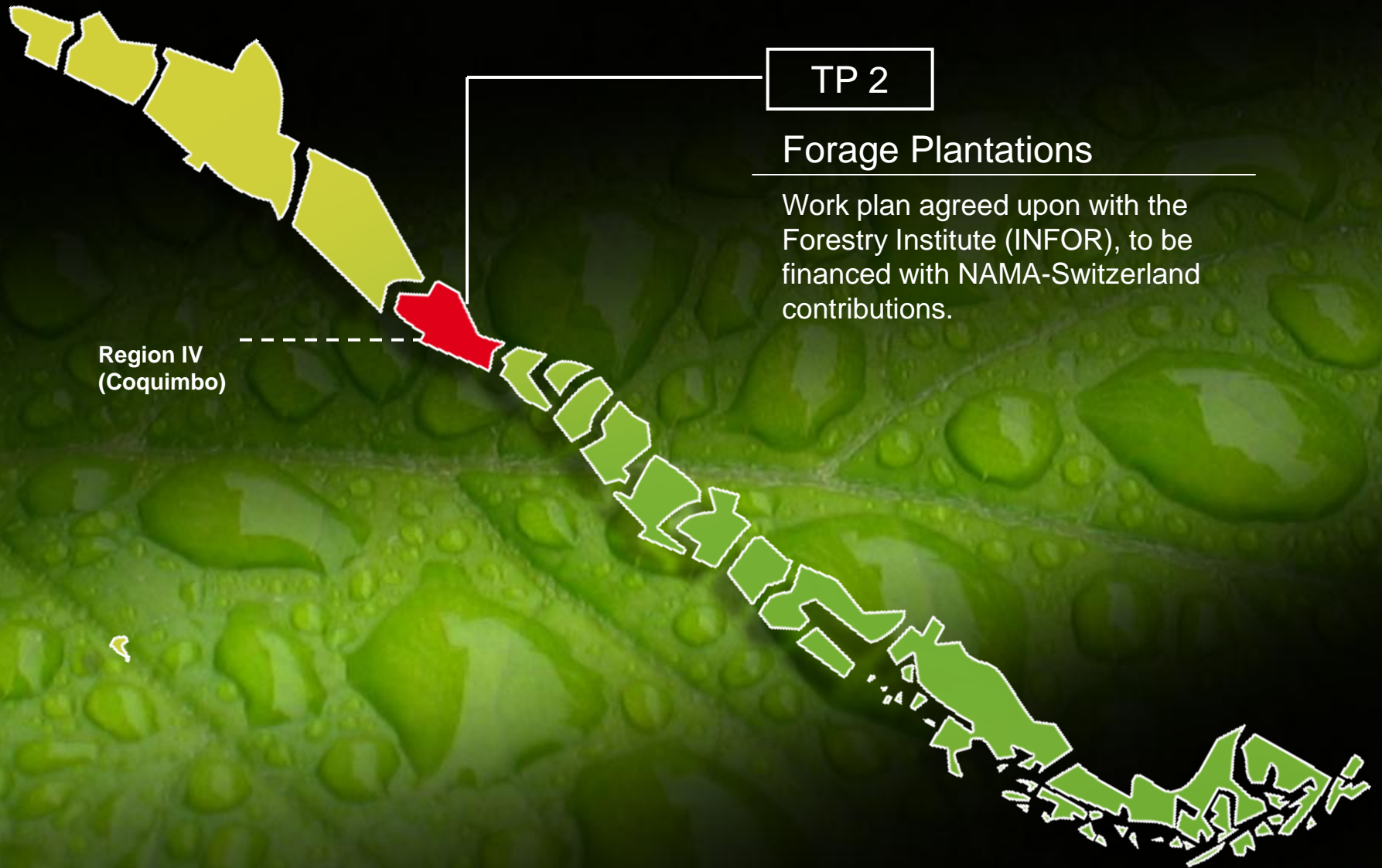
All typologies require that at least one pilot project be carried out in order to generate lessons learnt.



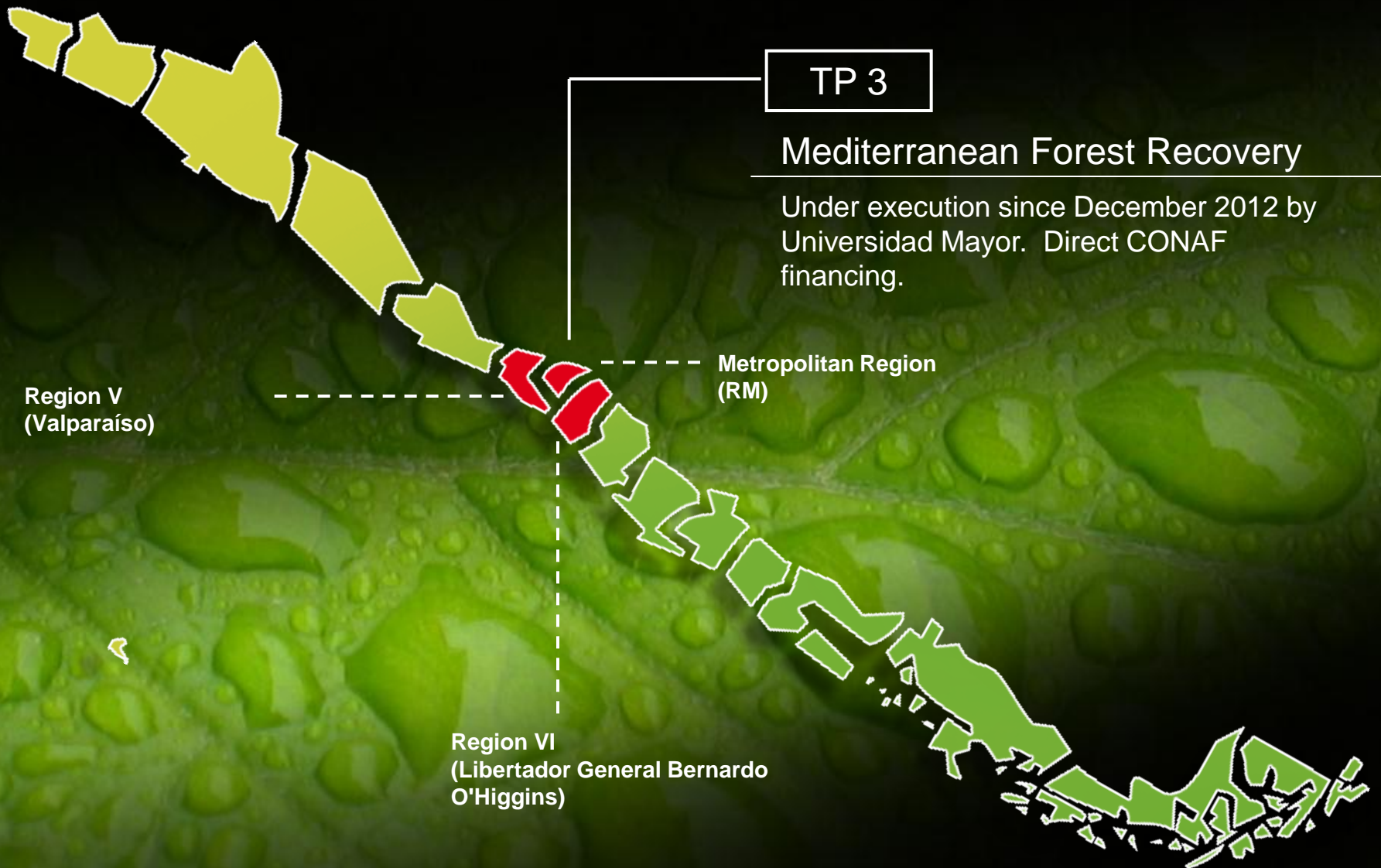
Progress to date in development of typologies



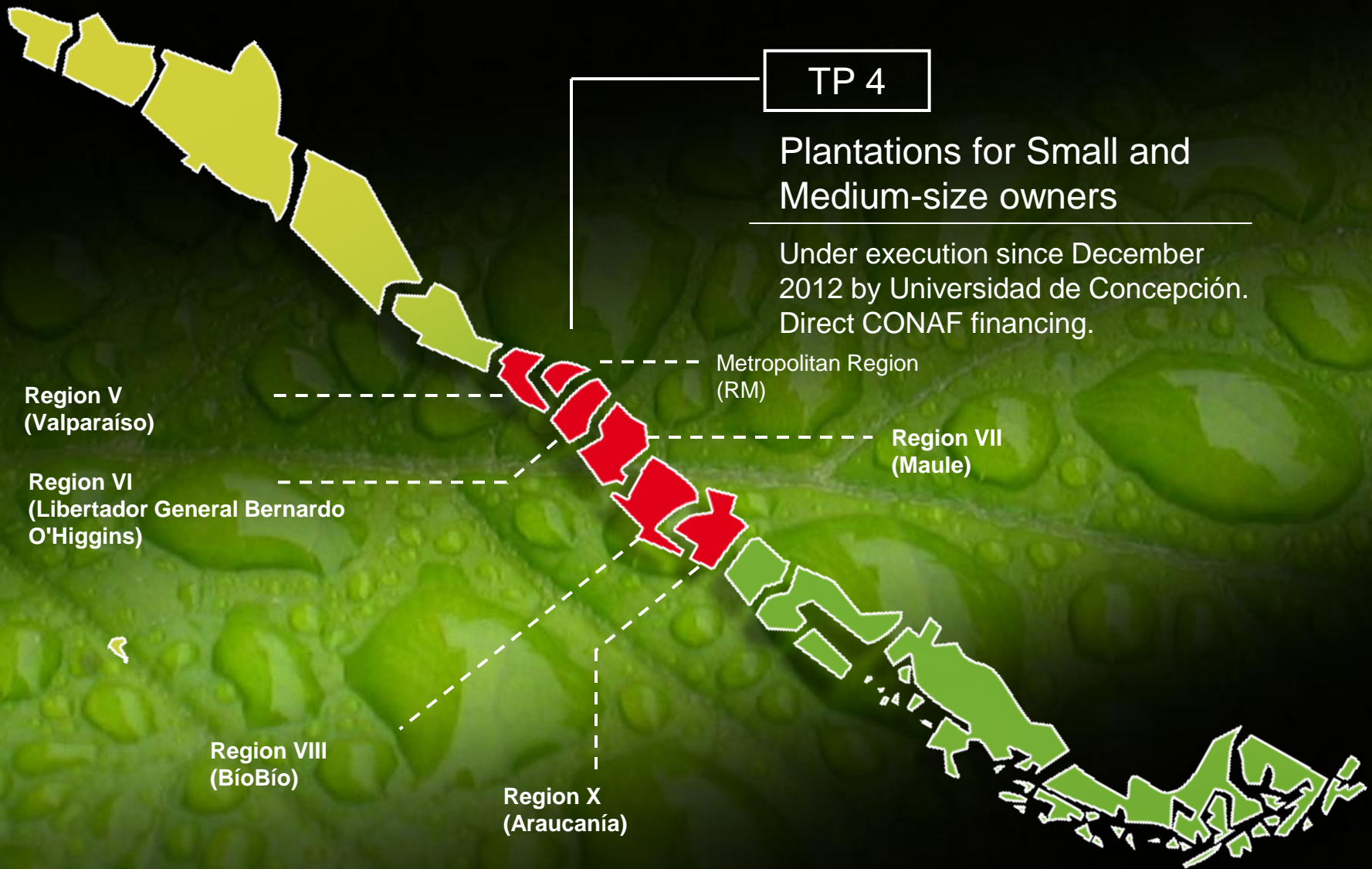
Progress to date in development of typologies



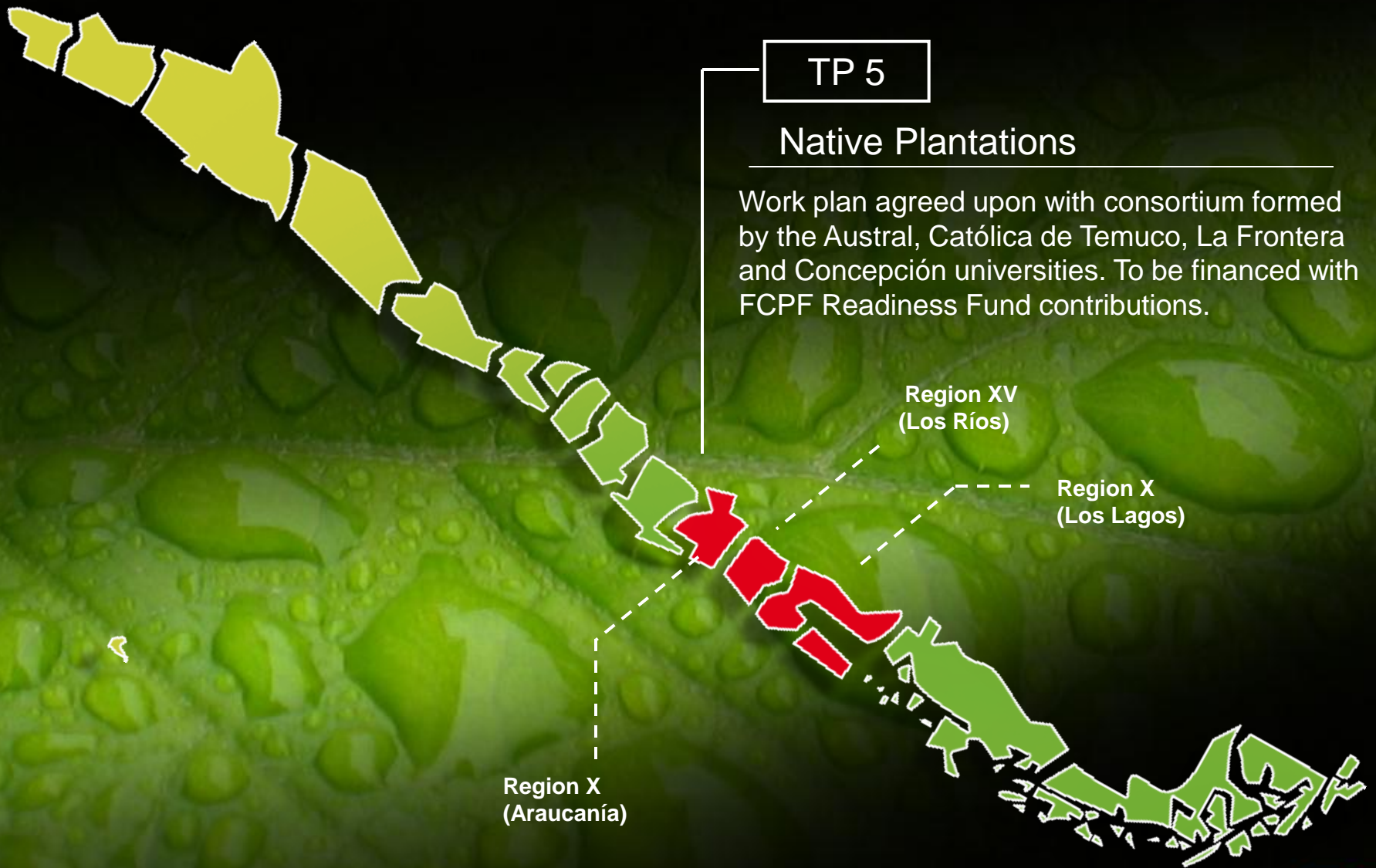
Progress to date in development of typologies



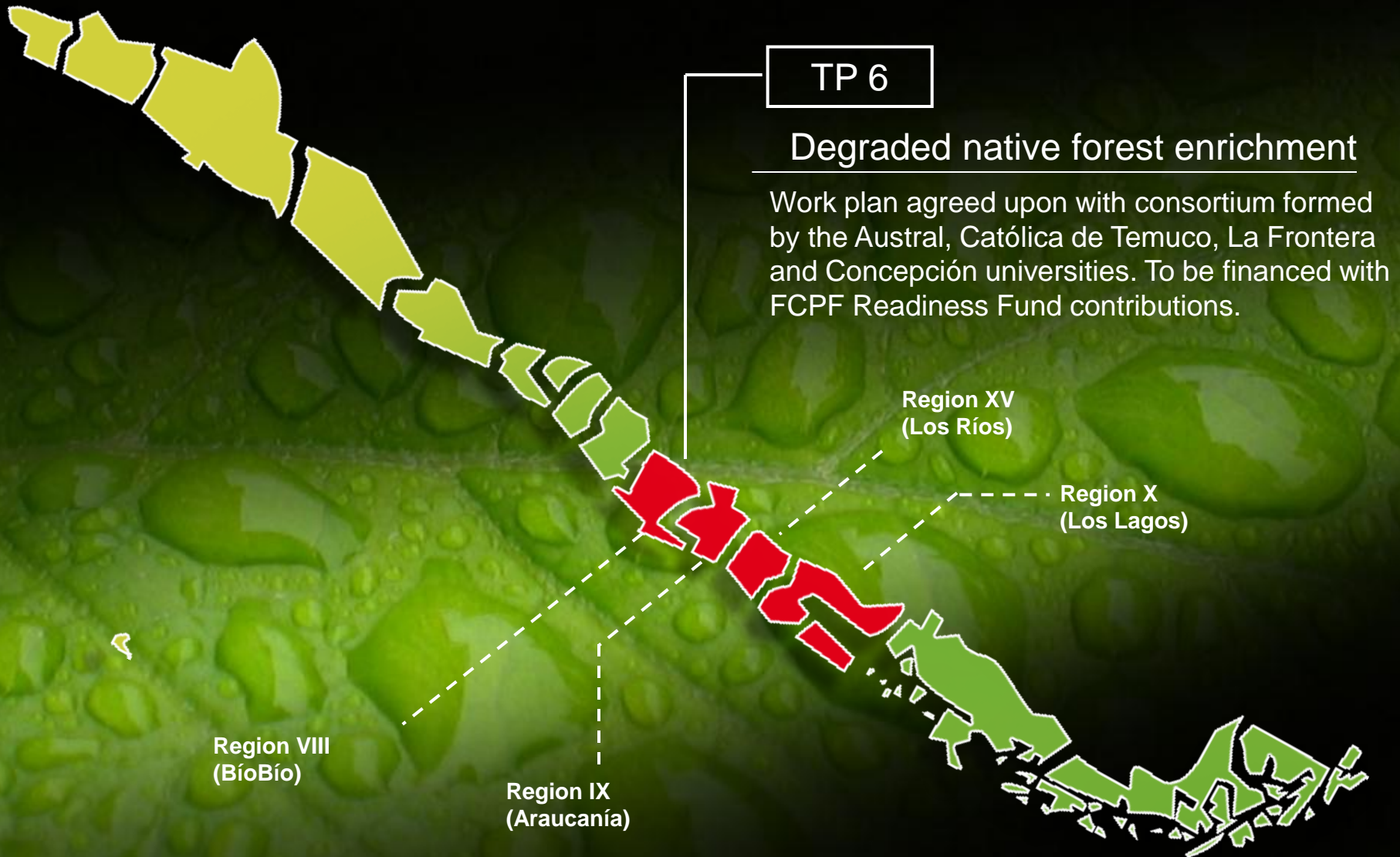
Progress to date in development of typologies



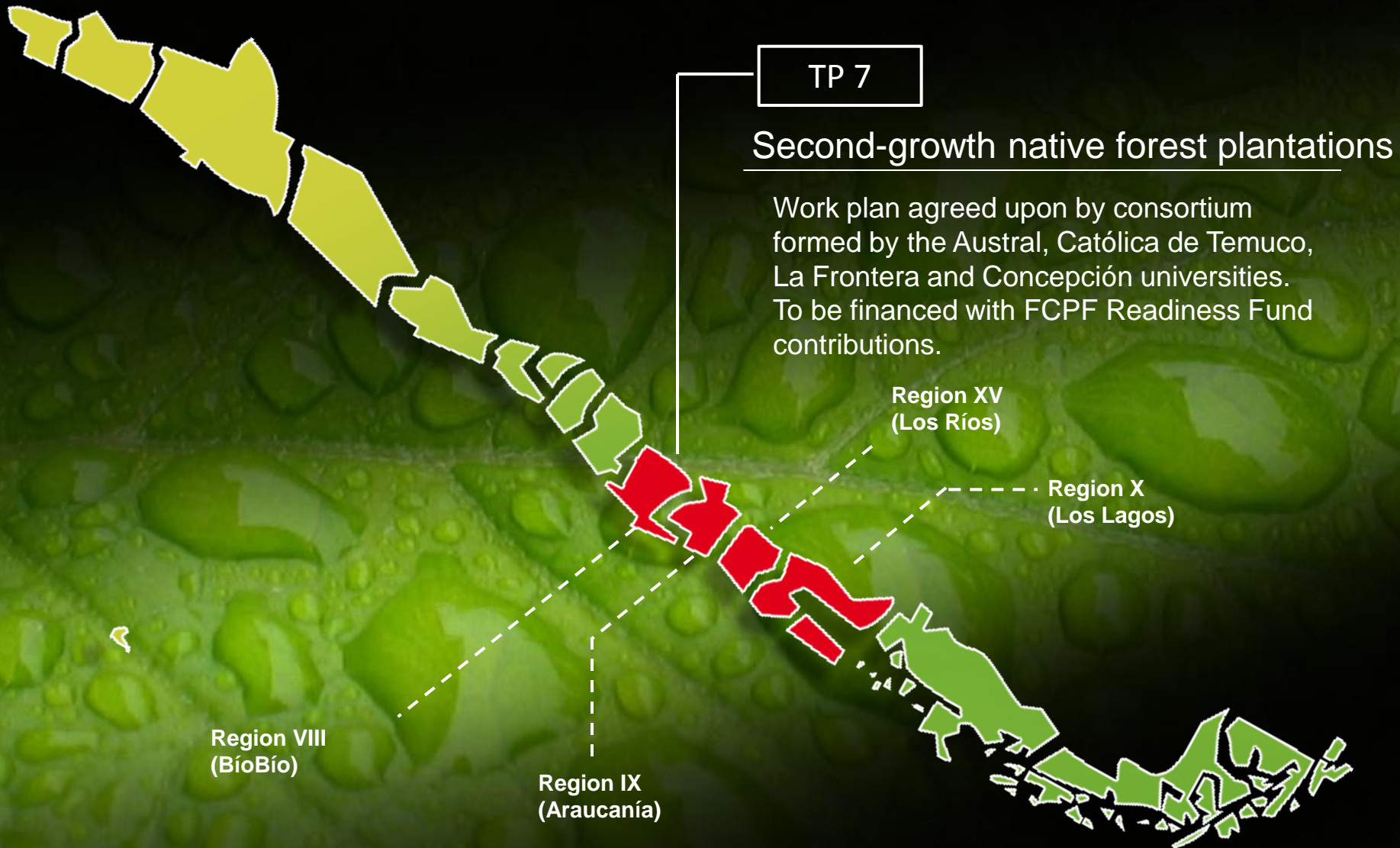
Progress to date in development of typologies



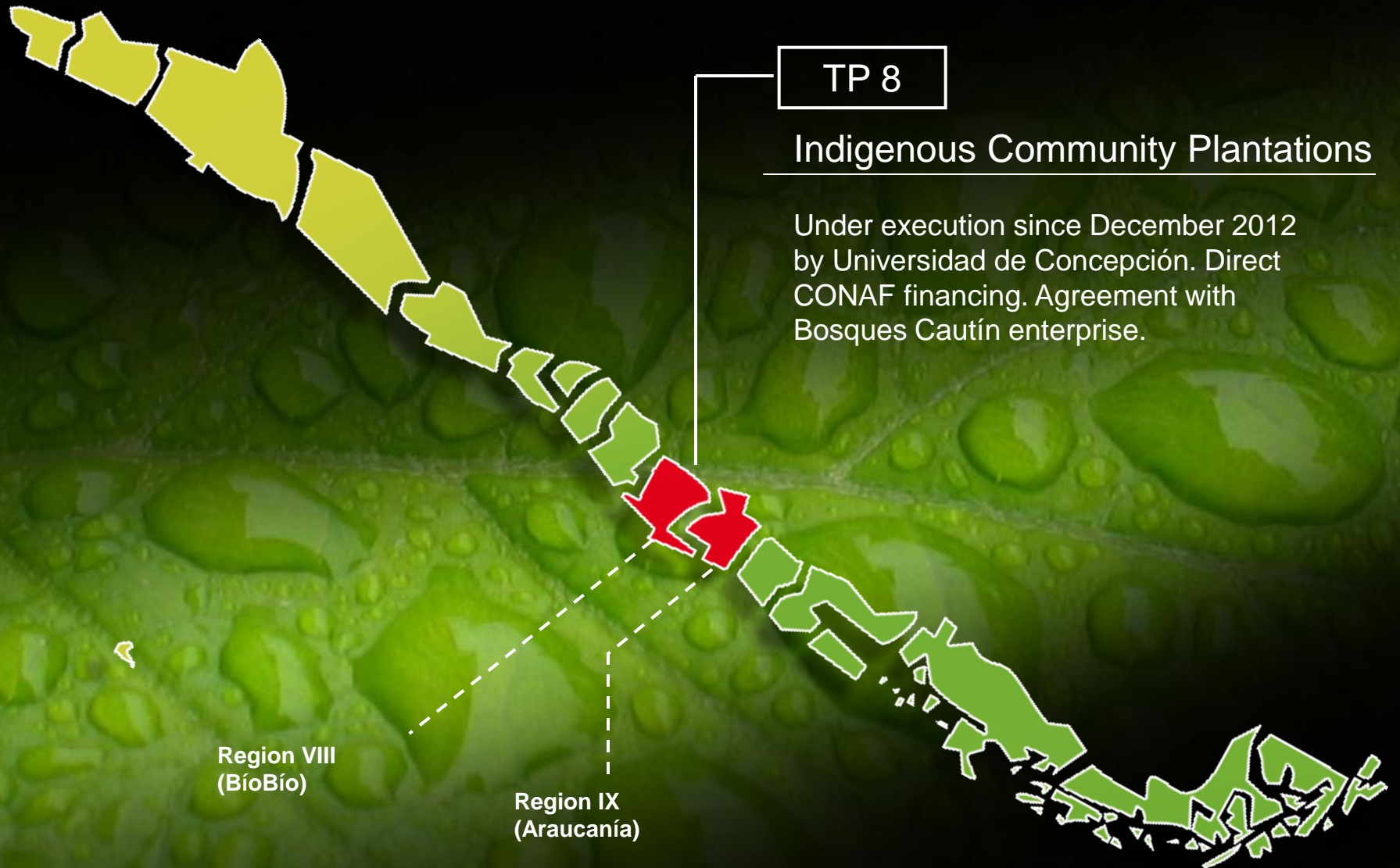
Progress to date in development of typologies



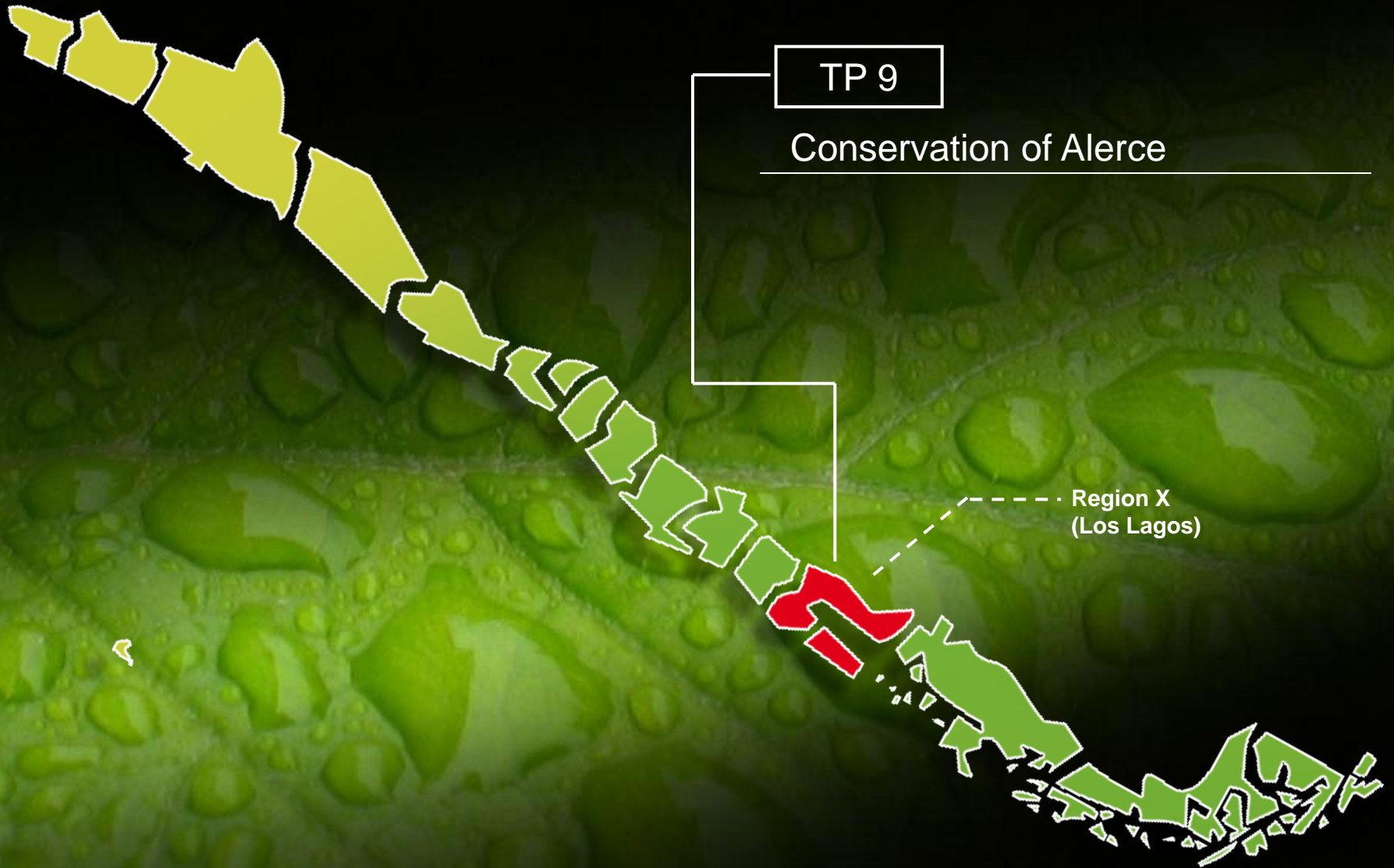
Progress to date in development of typologies



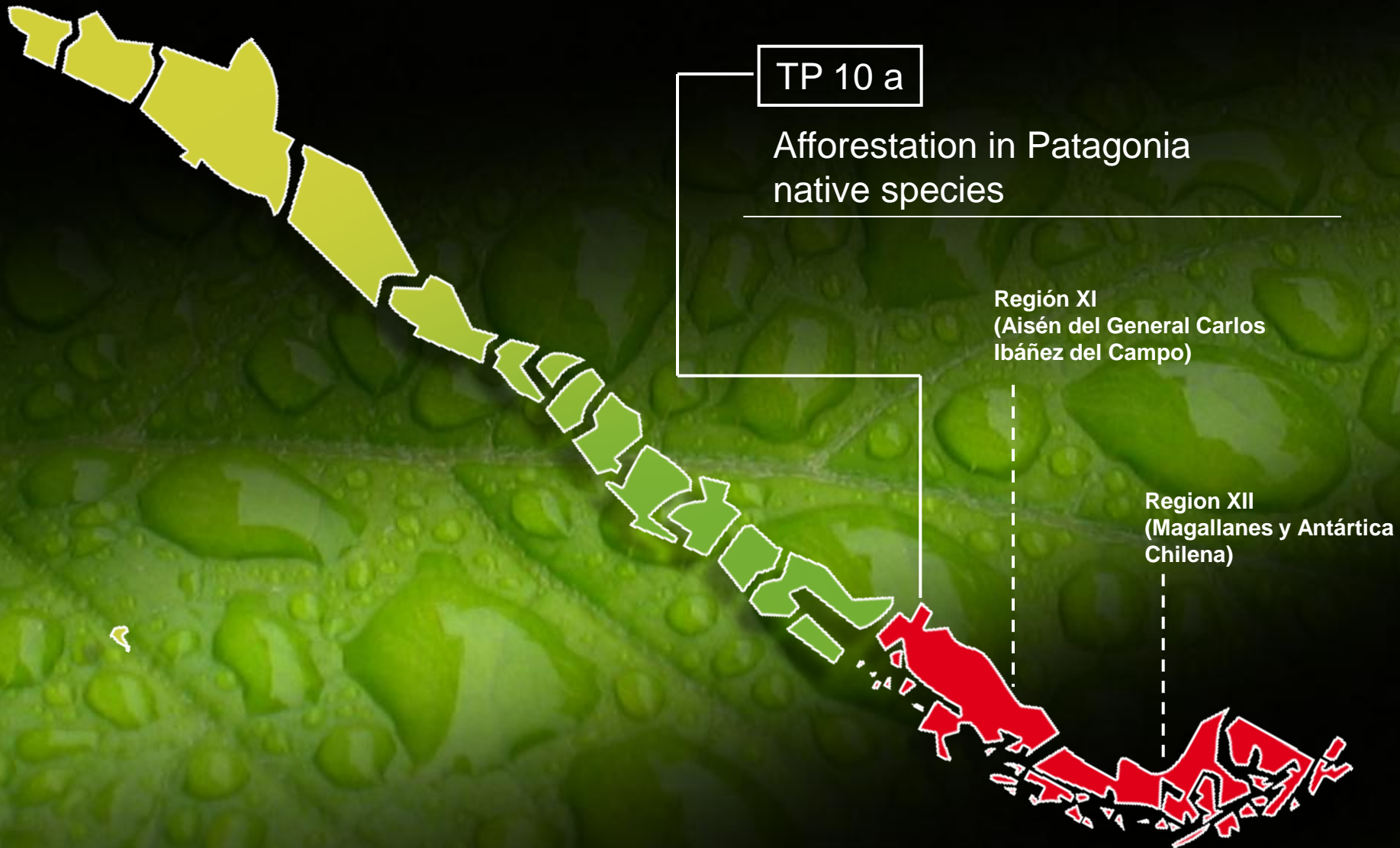
Progress to date in development of typologies



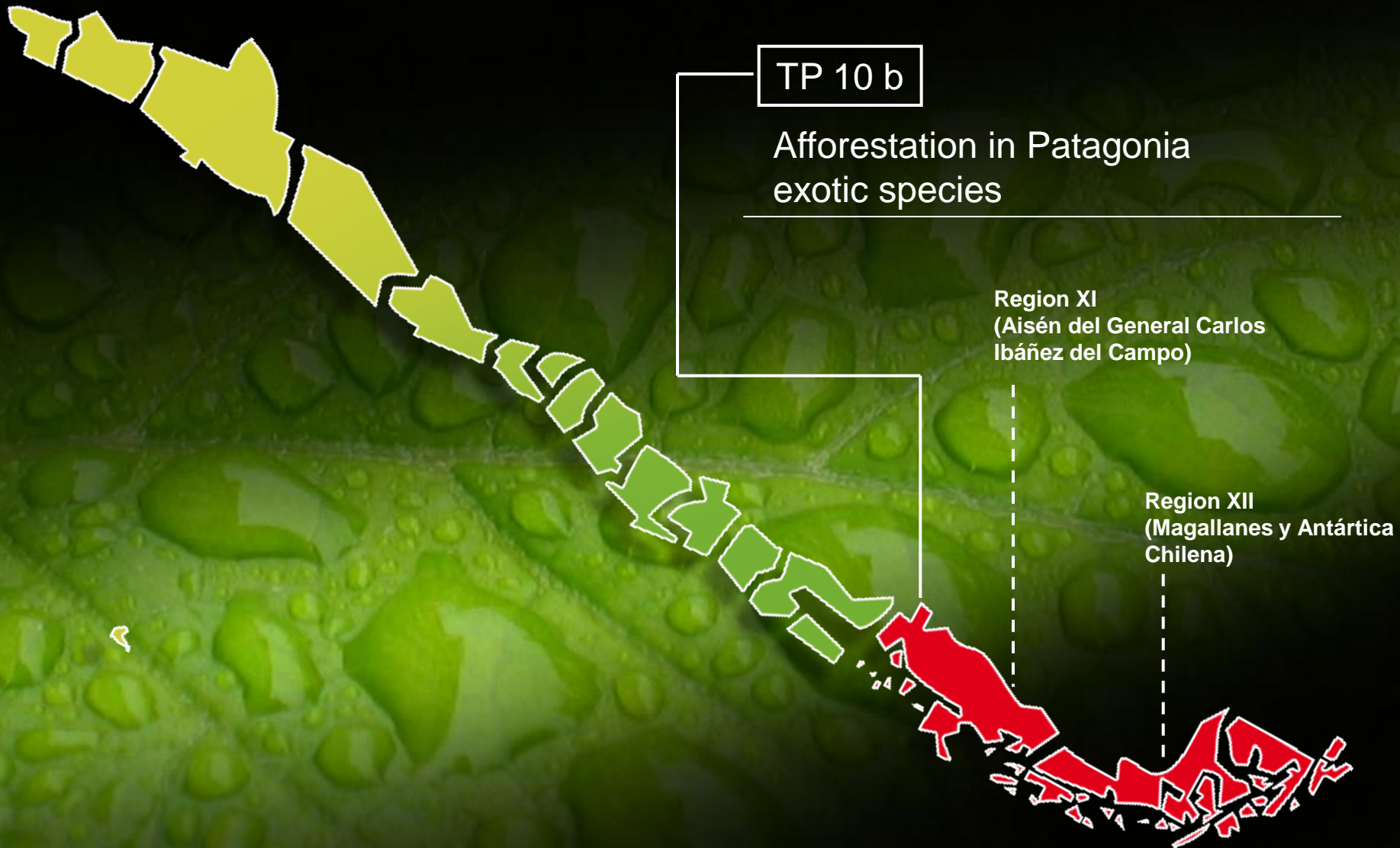
Progress to date in development of typologies



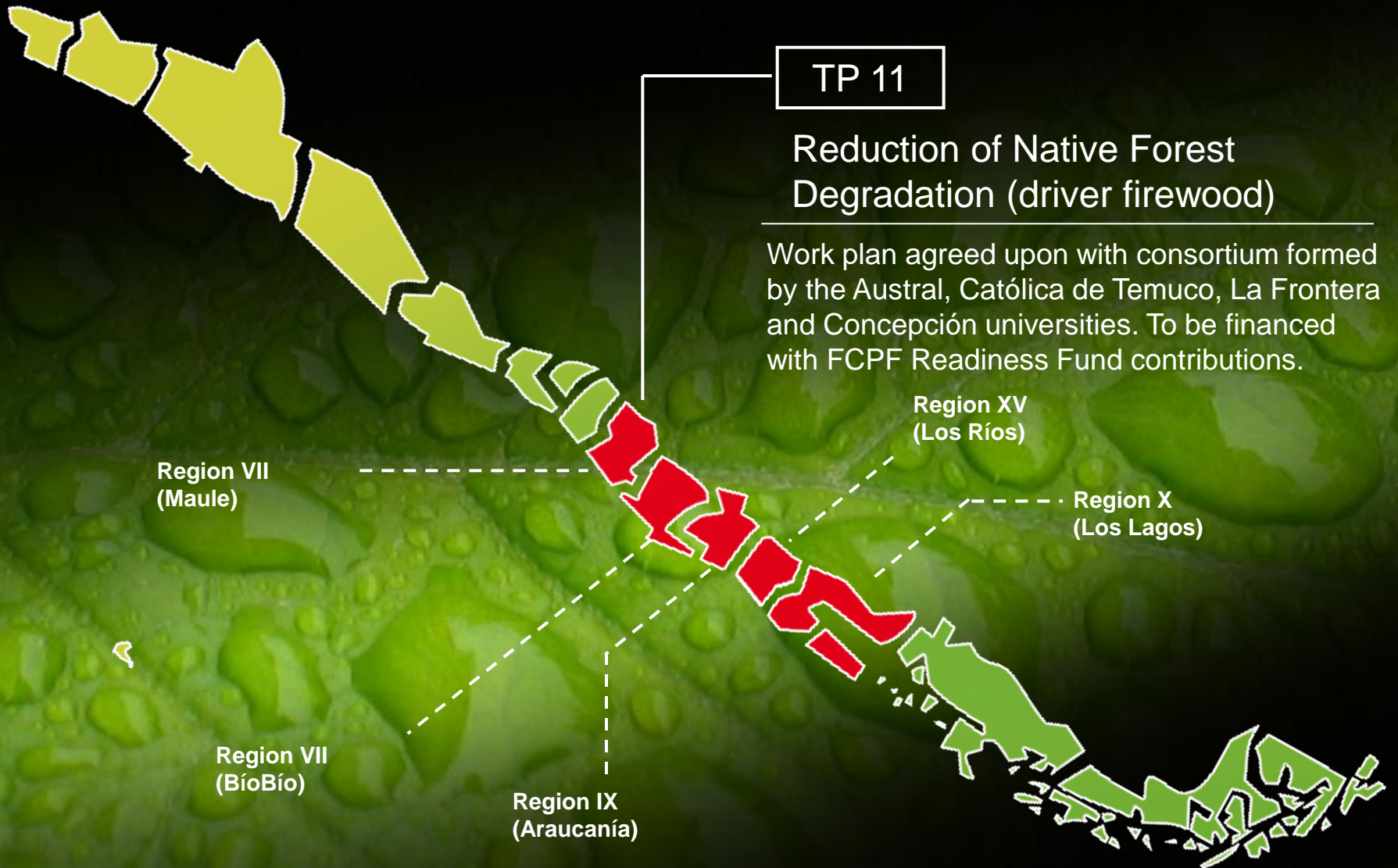
Progress to date in development of typologies



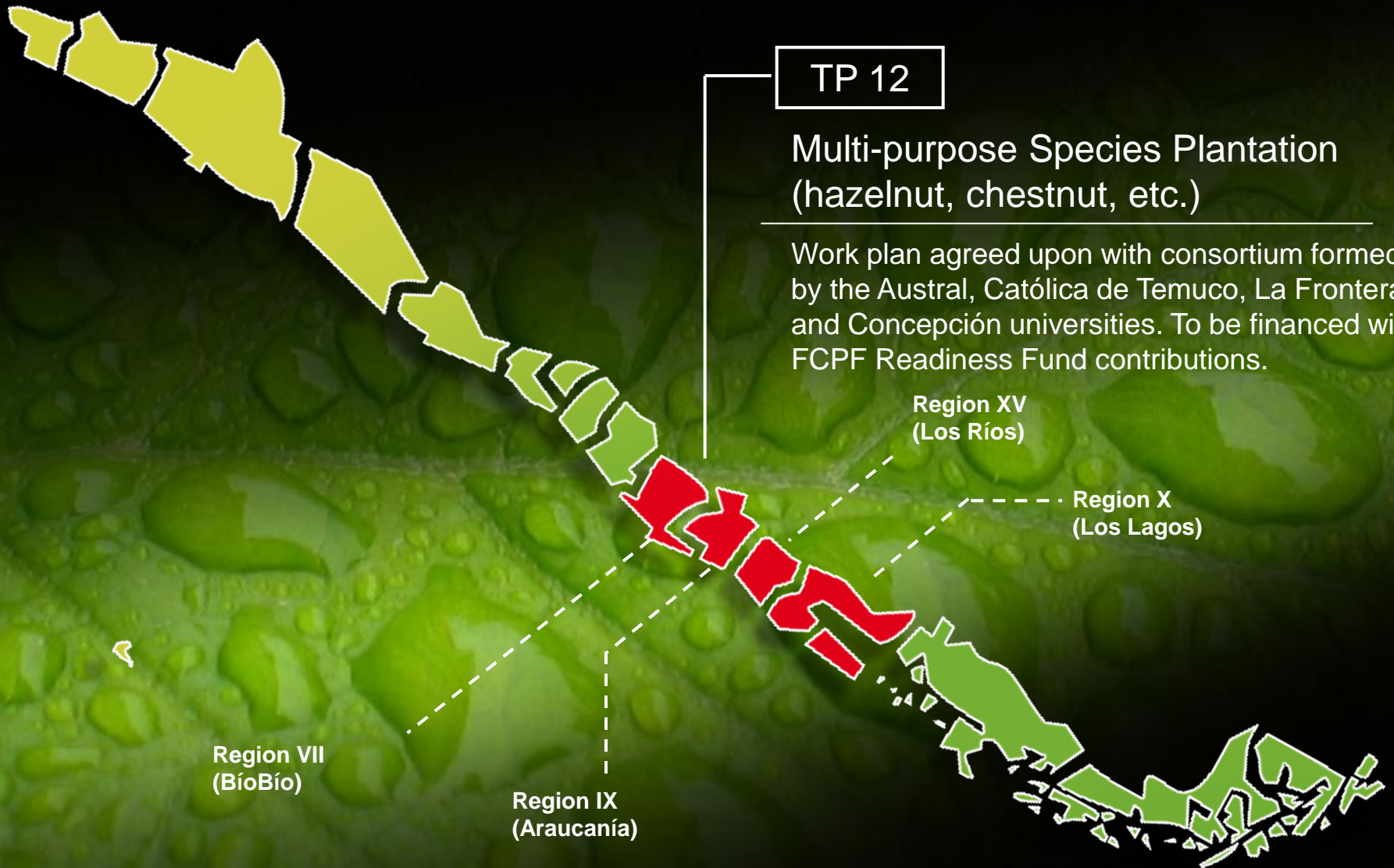
Progress to date in development of typologies



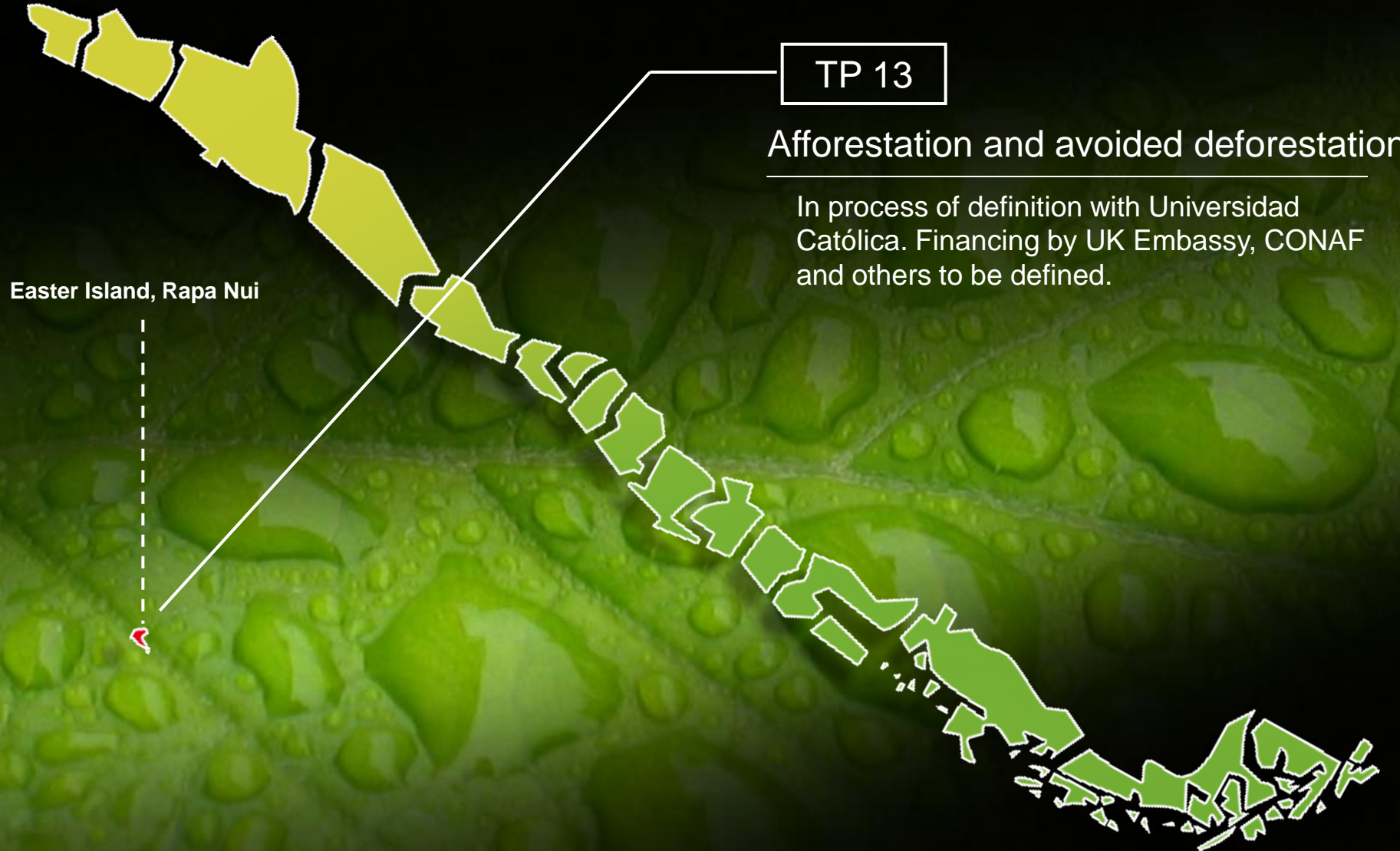
Progress to date in development of typologies



Progress to date in development of typologies



Progress to date in development of typologies



TP 13

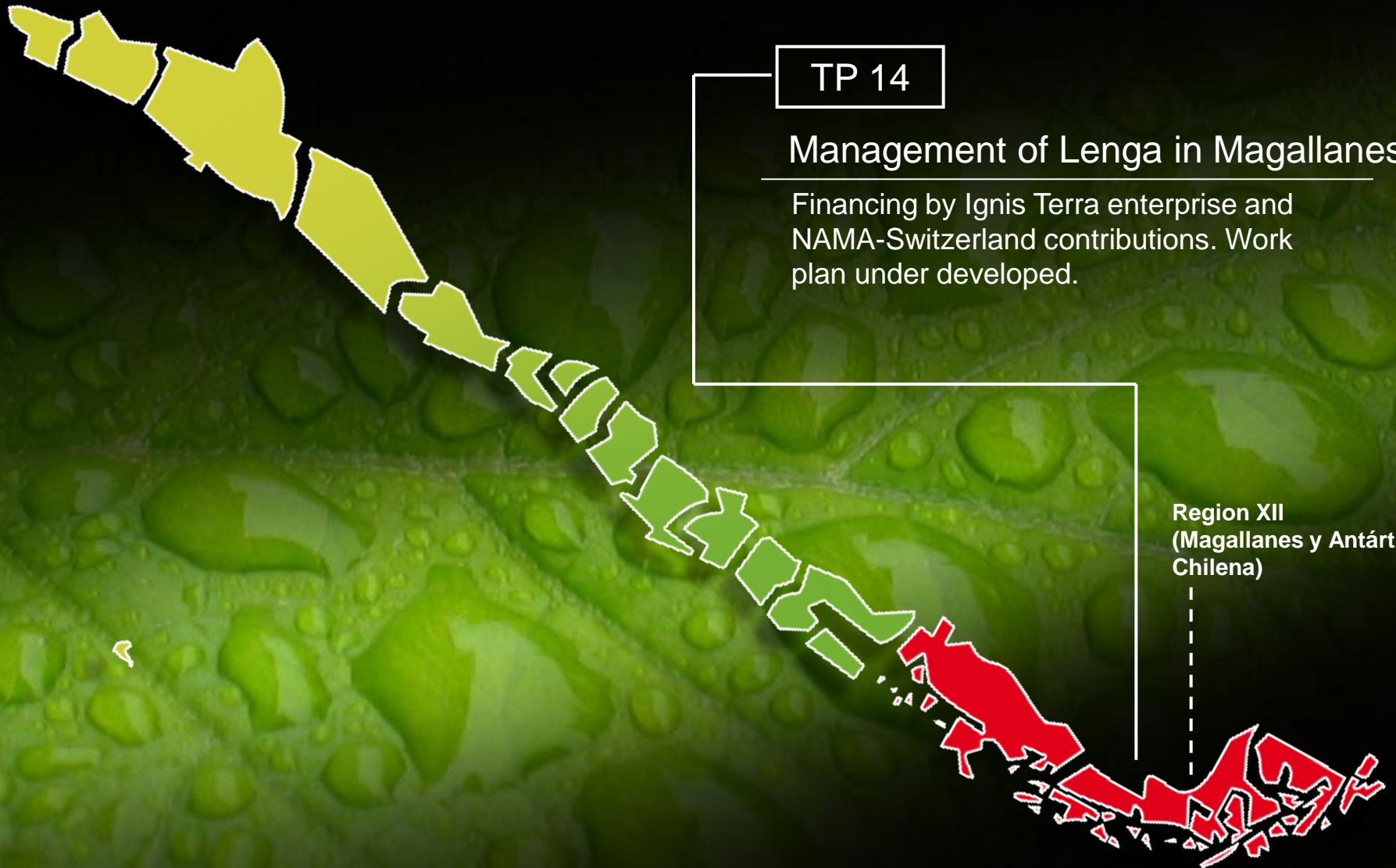
Afforestation and avoided deforestation

In process of definition with Universidad Católica. Financing by UK Embassy, CONAF and others to be defined.

Easter Island, Rapa Nui



Progress to date in development of typologies



TP 14

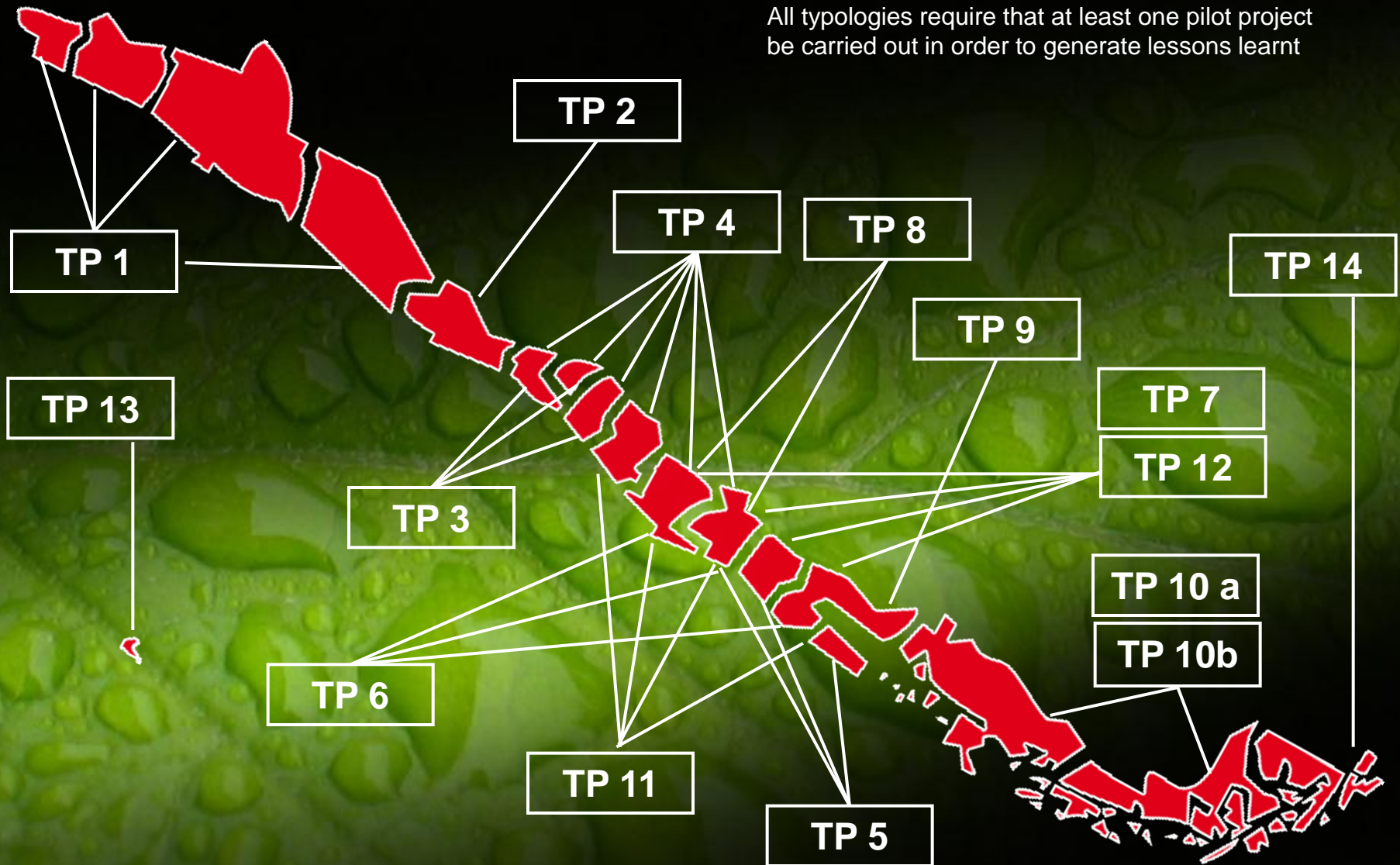
Management of Lenga in Magallanes

Financing by Ignis Terra enterprise and NAMA-Switzerland contributions. Work plan under developed.

Region XII
(Magallanes y Antártica
Chilena)

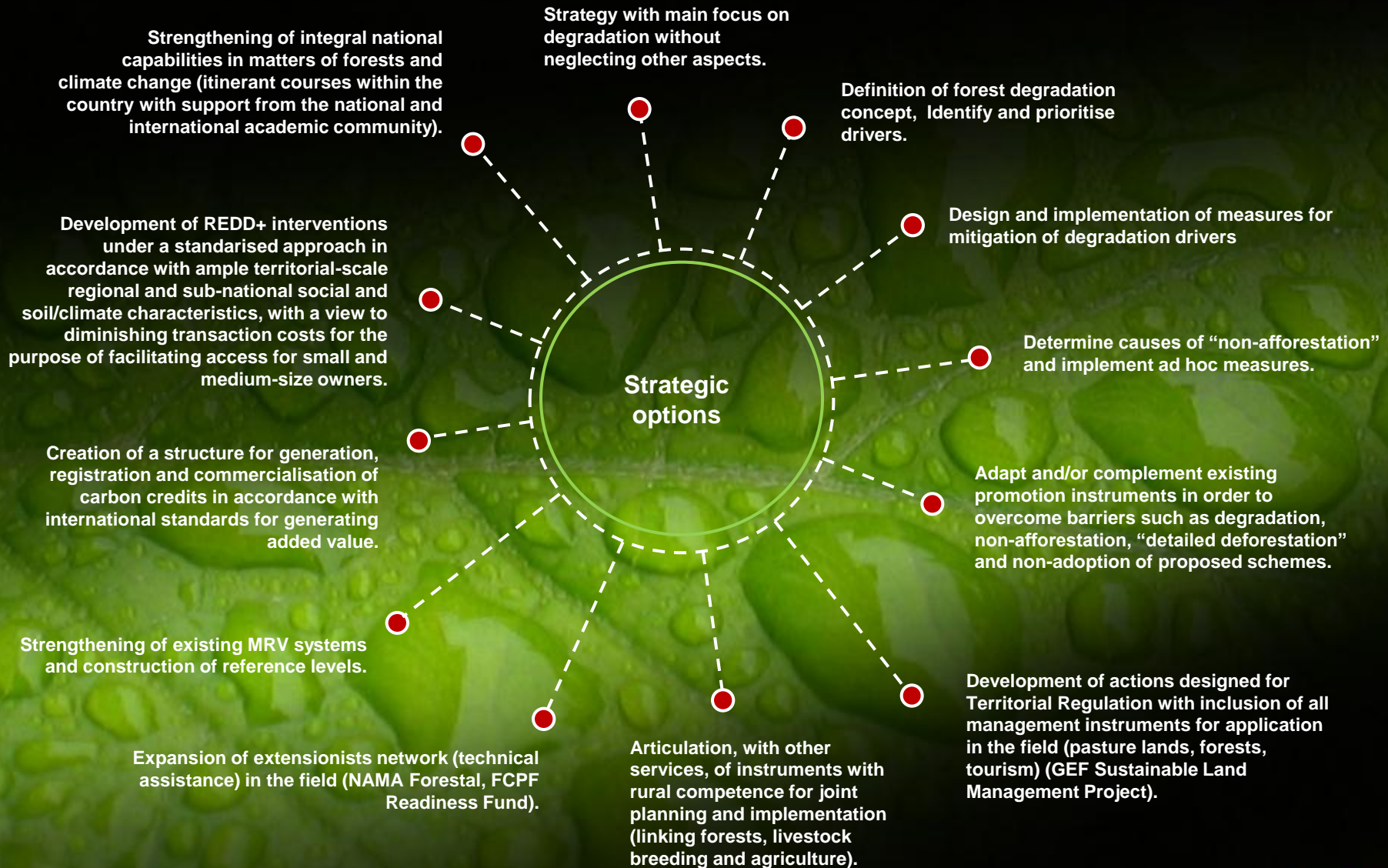
Progress to date in development of typologies

All typologies require that at least one pilot project be carried out in order to generate lessons learnt



Note: the geographical distribution proposed for each typology defined in theory should be considered to be referential, inasmuch as adjustments will be made while it is decided to put them into practice. There are additional typologies at present in the formulation stage at the request of public and private entities..

Strategic options



Non-carbon benefits....

Link with food safety and animal management of the communities that depend on the forests

Water.....territorial approaches and watershed regulation

Social ones...income from sale of carbon is for the rural population

Link with ancillary activities such as ethno-tourism

Scenery Approach....substantial progress will be made in an integration of the multiple activities (agriculture, livestock and forestry) which the rural sector habitually performs

beneficios

Additional positive socio-cultural impacts (forests in the hands of indigenous communities. Will be approached with consideration of cultural and ancestral pertinence)

All the local norms will be respected, along with what is established in the Operating Policies of the World Bank, the safeguards within the ambit of the Convention and the voluntary principles of FSC, VCS and CCBA (REDD-SES), among others

Biodiversity.....
Planting and recovery of native forest with emphasis on creation and maintenance of biological corridors

Protection of family income based on what is provided by the forest (self-consumption)

Clear distribution of benefits---- money goes directly to the owners just as has been happening for more than 40 years with the forestry promotion instruments administered by CONAF

Estimated capture rates by typology - 2010-2020 period

Denomination	Capture/Reduction Rate (tCO ₂ eq/ha/yr)	Annual Implementation Area (ha)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Accumulated 2010-2020
TP 1 – Arid-zone Species Plantations	4	300	1.200	2.400	3.600	4.800	6.000	7.200	8.400	9.600	10.800	12.000	13.200	79.200
TP 2 – Forage Plantations Near North	10	2.000	20.000	40.000	60.000	80.000	100.000	120.000	140.000	160.000	180.000	200.000	220.000	1.320.000
TP 3 – Mediterranean Forest Recovery	10	1.500	15.000	30.000	45.000	60.000	75.000	90.000	105.000	120.000	135.000	150.000	165.000	990.000
TP 4 – Small-scale Owner Plantations	18	5.000	90.000	180.000	270.000	360.000	450.000	540.000	630.000	720.000	810.000	900.000	990.000	5.940.000
TP 5 – Native Plantations	15	2.000	30.000	60.000	90.000	120.000	150.000	180.000	210.000	240.000	270.000	300.000	330.000	1.980.000
TP 6 – Degraded Native Forest Enrichment	15	3.000	45.000	90.000	135.000	180.000	225.000	270.000	315.000	360.000	405.000	450.000	495.000	2.970.000
TP 7 – Second-growth Native Forest Management	3,4	2.000	6.760	13.520	20.280	27.040	33.800	40.560	47.320	54.080	60.840	67.600	74.360	446.160
TP 8 – Indigenous Community Plantations	14	600	8.400	16.800	25.200	33.600	42.000	50.400	58.800	67.200	75.600	84.000	92.400	554.400
TP 9 – Alerce Conservation	2,2	400	880	1.760	2.640	3.520	4.400	5.280	6.160	7.040	7.920	8.800	9.680	58.080
TP 10 - Afforestation Patagonia	15	1.500	22.500	45.000	67.500	90.000	112.500	135.000	157.500	180.000	202.500	225.000	247.500	1.485.000
TP 11 – Reduction of Native Forest Degradation	10	6.000	60.000	120.000	180.000	240.000	300.000	360.000	420.000	480.000	540.000	600.000	660.000	3.960.000
TP 12 – Dual-purpose Plantations (hazelnut, chestnut, etc.)	10	600	6.000	12.000	18.000	24.000	30.000	36.000	42.000	48.000	54.000	60.000	66.000	396.000
TP 13 – Easter Island Reforestation	8	120	960	1.920	2.880	3.840	4.800	5.760	6.720	7.680	8.640	9.600	10.560	63.360
TP 14 – Sustainable Management of Lenga in Magallanes	6	600	3.600	7.200	10.800	14.400	18.000	21.600	25.200	28.800	32.400	36.000	39.600	237.600
													Total capturas	20.479.800

CHILE'S PROPOSAL TO THE CARBON FUND

FOREST
CARBON
PARTNERSHIP
FACILITY



TP 5

TP 6

TP 7

TP 9

TP 10 a

TP 10 b

TP 11

TP 12

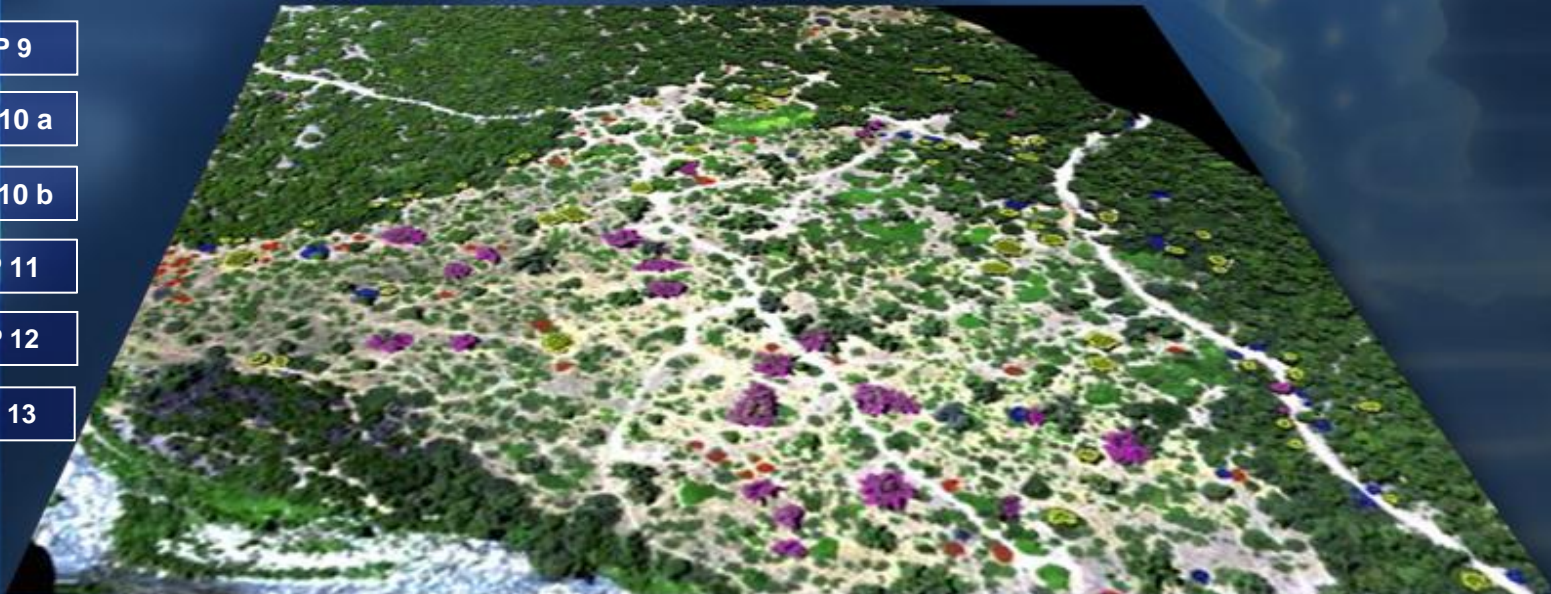
TP 13

Concentrated on quantifying, monitoring and reducing forest degradation associated with:

- Fires
- Cutting for timber purposes without sustainable yield
- Unsustainable use of firewood
- Inclusion of livestock

What is proposed to be done in these pilot plans associated with recovery and avoided degradation of native forests?:

- Determination of reference levels (main focus on forest degradation).
- Practical application of available carbon project methodologies (VCS-MDL, and others)..
- Quantification of emissions for each driver.
- Use of remote sensors (i.e. LIDAR, hyperspectral images, etc.).



CHILE'S PROPOSAL TO THE CARBON FUND

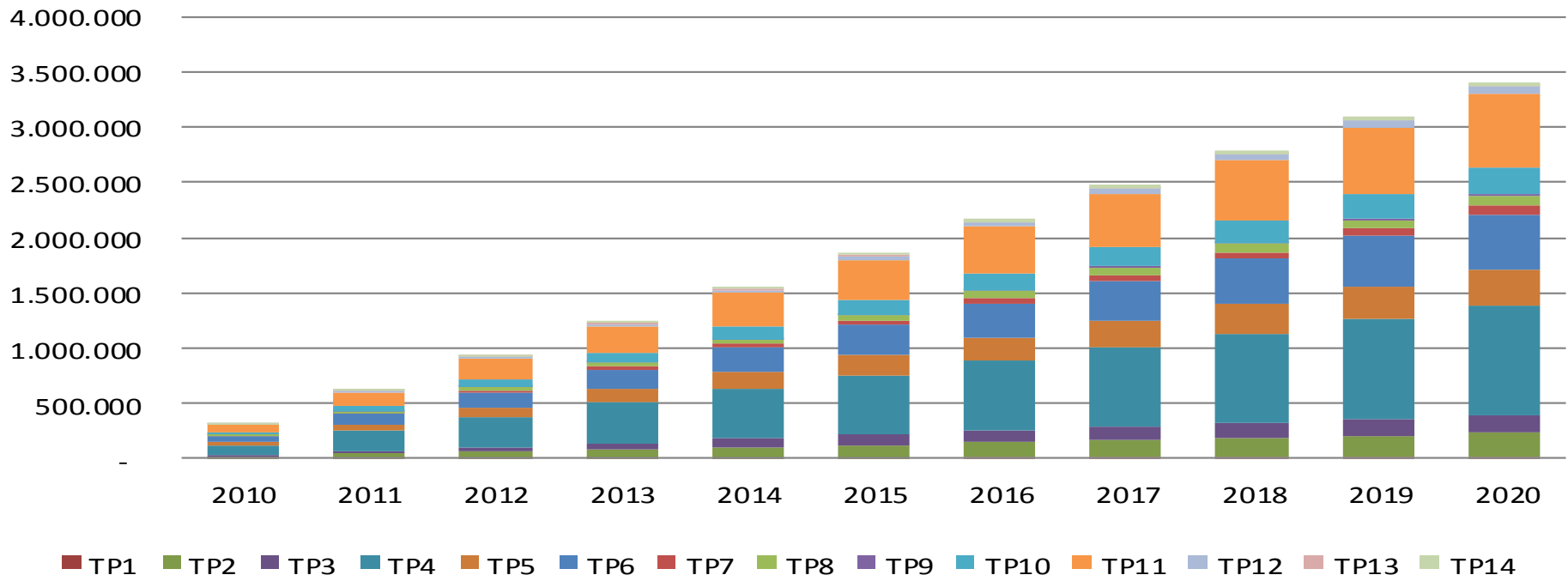


**FOREST
CARBON
PARTNERSHIP
FACILITY**

Description	Area (ha)	Reduction/Capture (tonCO ₂ e)
General Figures for the Country		
Total forests Chile	16.343.852	
Feasibility of Afforestation	2.289.517	938.701.970
Feasibility of Native Forest Management	6.064.536	994.583.904
Feasibility of Managed Forests (Afforestation+Management)	8.354.053	1.933.285.874
Estimated Potential CO₂ Projects		
Potential for CO ₂ Projects (PBCCh)	1.255.000	622.052.000
Foreseen Implementation (2010-2050)		
Implementation of the PBCCh (2010-2050)	1.050.420	267.168.300
Potential CO₂ Projects associated with Carbon Fund (2010-2050)	760.000	172.662.000
Foreseen Implementation (2010-2020)		
Implementation of the PBCCh (2010-2020)	281.820	20.479.800
Implementation of CO₂ Projects associated with Carbon Fund (2010-2020)	171.820	11.200.200



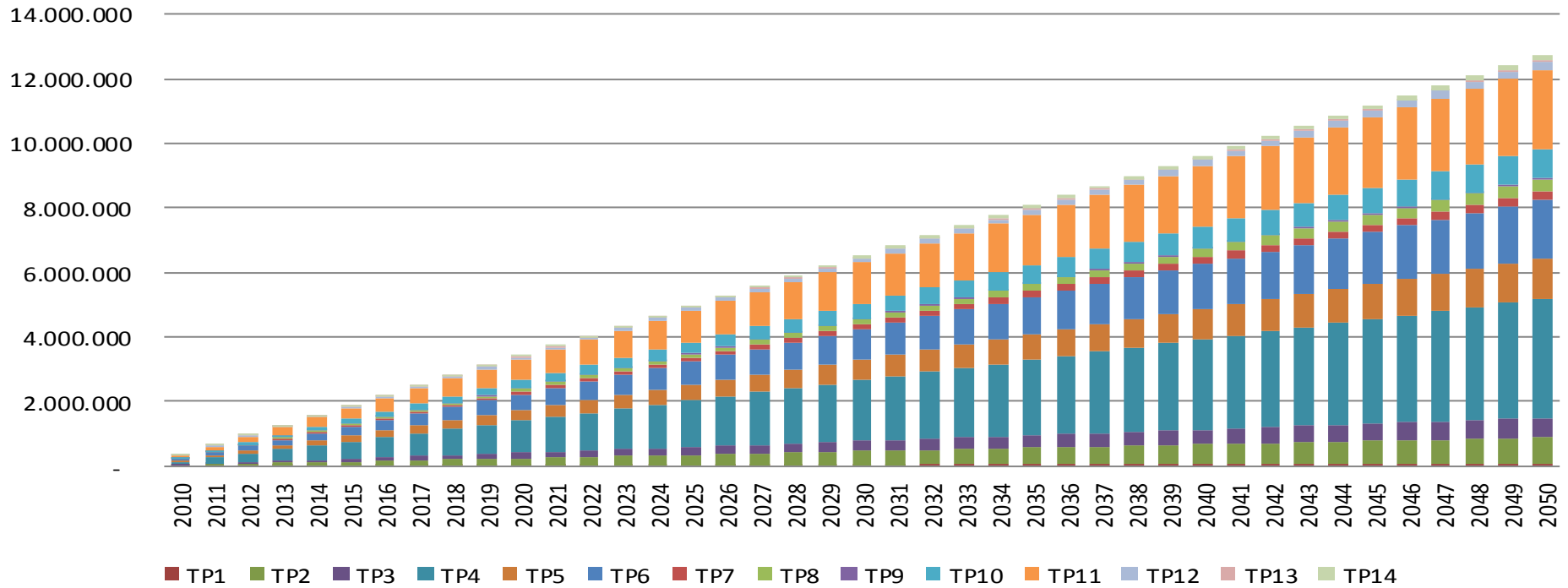
Annual Capture/Reduction by Typology (PBCCh) Period 2010-2020 (ton CO₂e/year)



CHILE'S PROPOSAL TO THE CARBON FUND



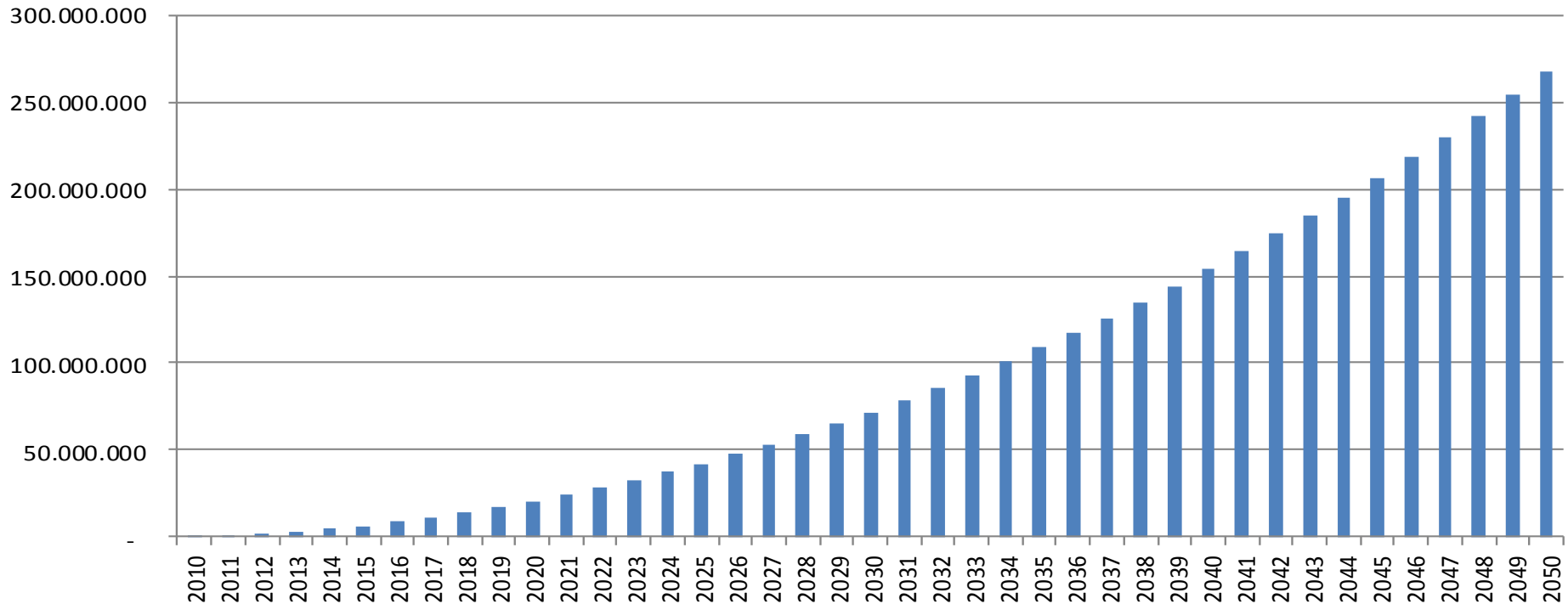
Annual Capture/Reduction by Typology (PBCCh) Period 2010-2050 (ton CO₂e/year)



CHILE'S PROPOSAL TO THE CARBON FUND



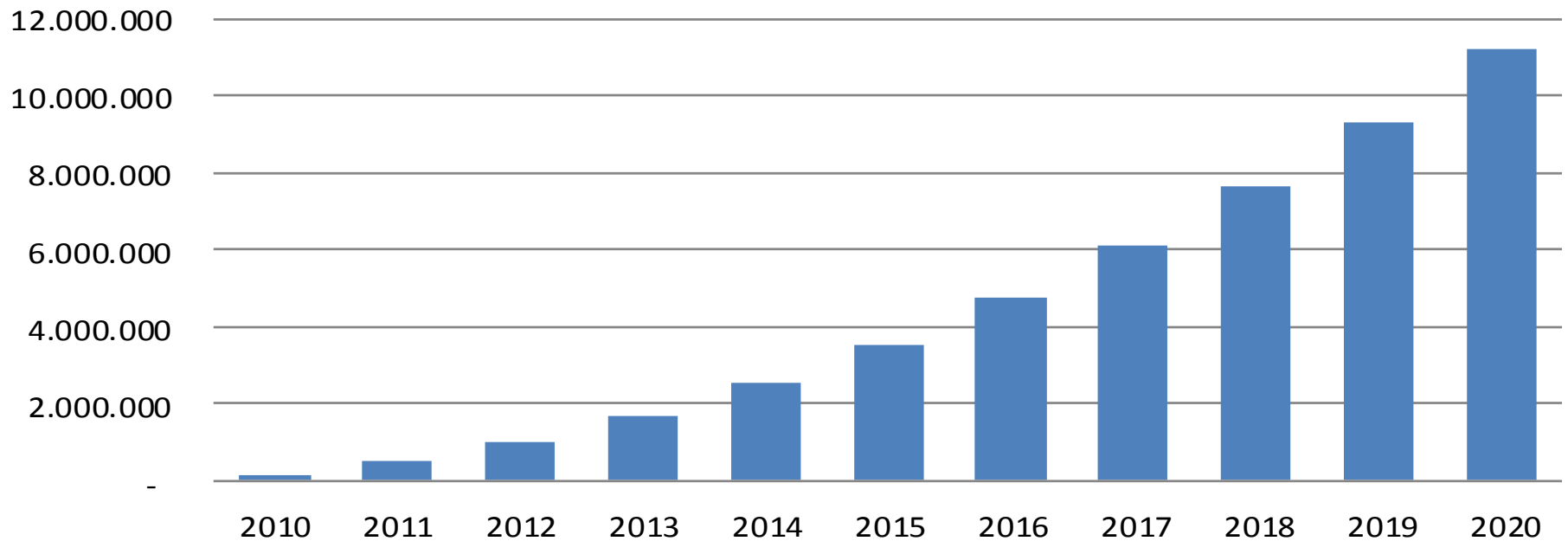
**Accumulated Capture/Reduction.
Period 2010-2050
(ton CO₂e) (PBCCh)**





Accumulated Capture/Reduction for Carbon Fund

Period 2010-2020
(ton CO₂e/year)



CHILE'S PROPOSAL TO THE CARBON FUND

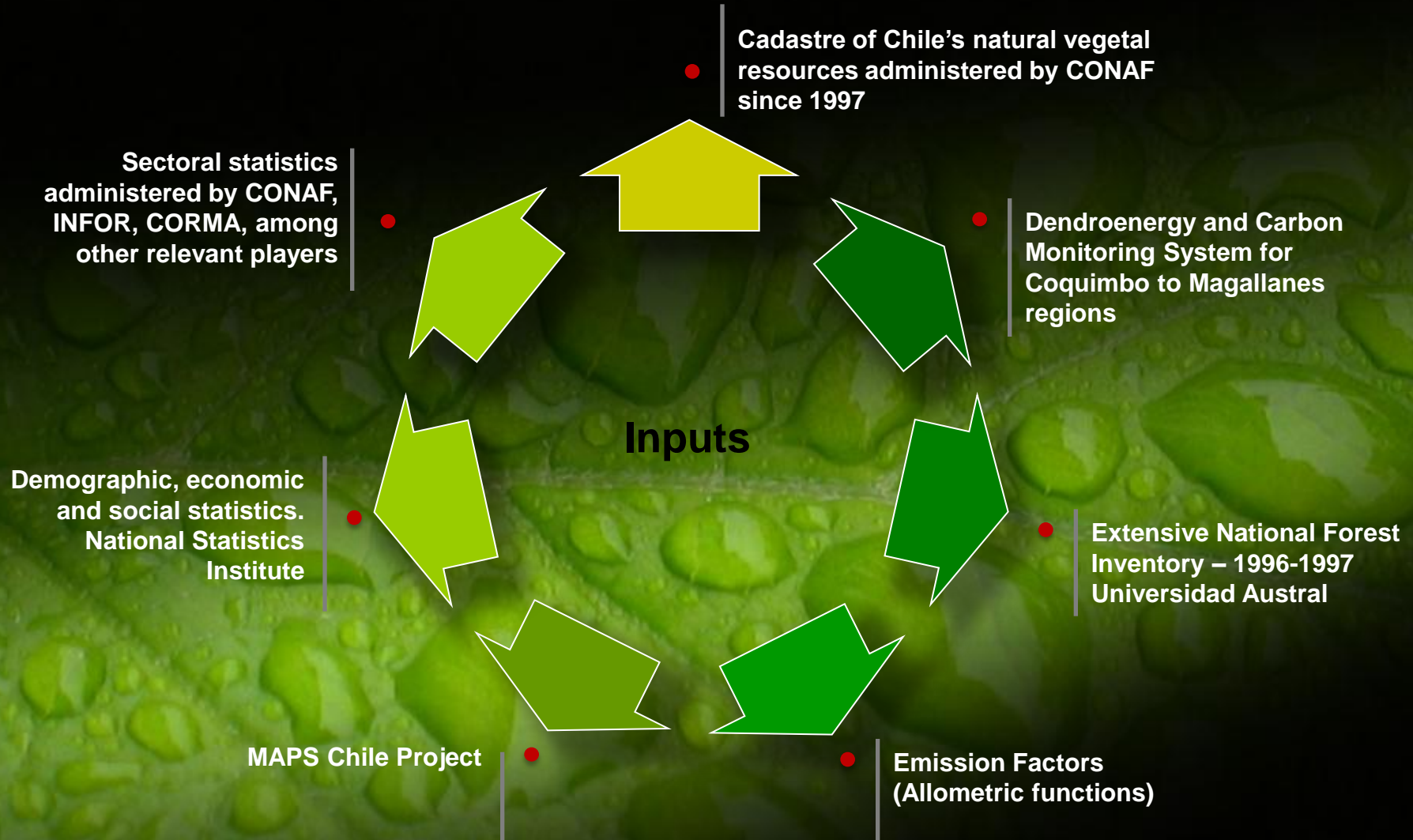


FOREST
CARBON
PARTNERSHIP
FACILITY

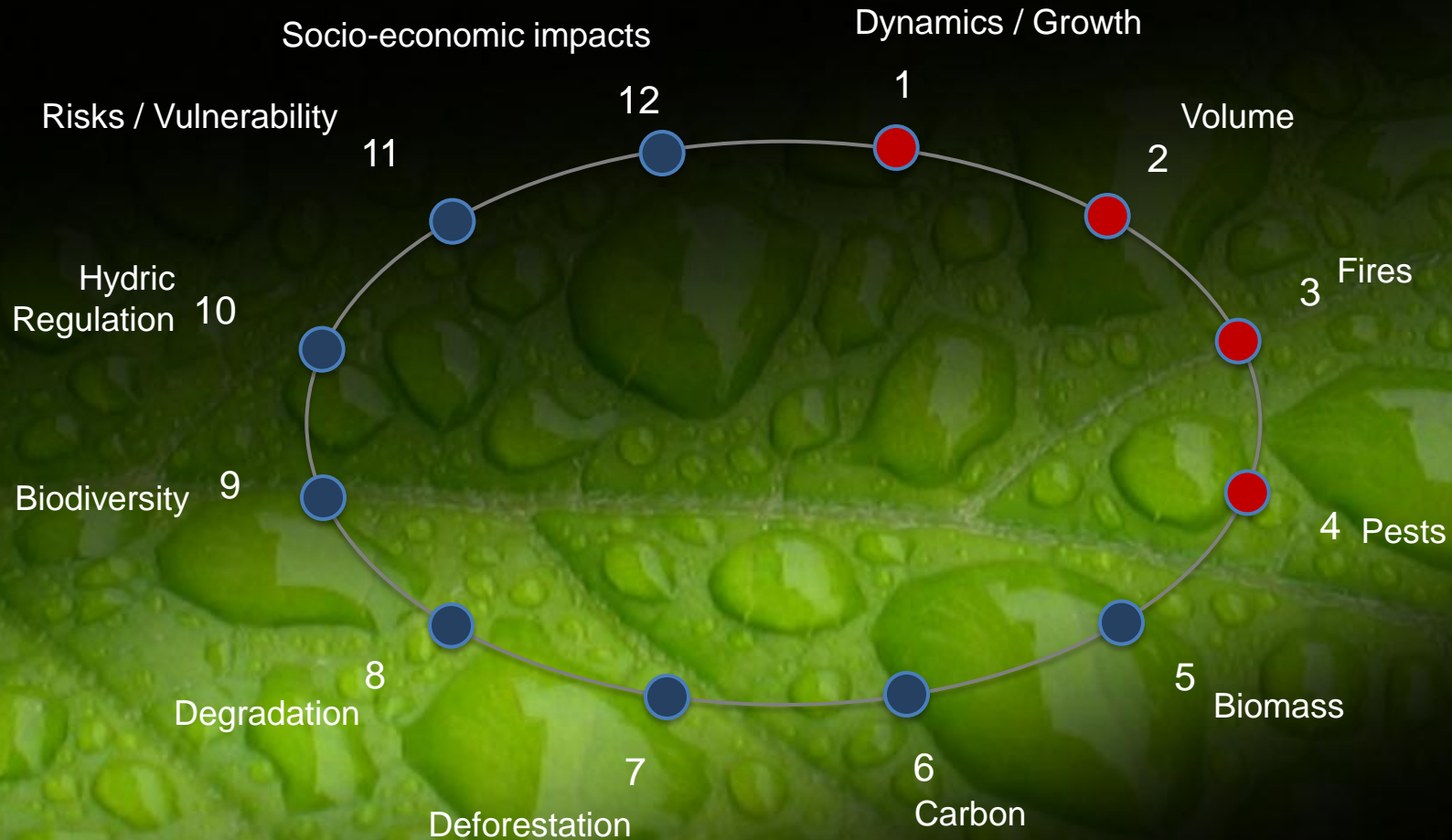
All considering that:

1. With the funds obtained by this means (CF) it is sought to establish an **ADDITIONAL INCENTIVE** consisting of a guaranteed base price (for the first 11 million tons of CO₂), regardless of the market prices, that can provide greater support to potential owners interested in participating in Forest Carbon initiatives. Independently of this, the owners, in their capacity as owners of the carbon, will take the final sale decision in accordance with the best alternatives of the moment.
2. CONAF will make sure to provide assistance, in the best possible manner, to the owners of forest resources and consequently of the carbon, so that they can receive as completely as possible the income that this can generate, whether it be by means of the Carbon Fund, the voluntary market or other mechanisms that may appear in the future.
3. Chile's safeguard for the Carbon Fund in this system consists of the fact that the funds will only be employed on the basis of Verified Reduction Credits. With this, the possibility of the Reduction/Capture not materialising is eliminated.

Reference levels



Monitoring System



Concretion of projects in climate change matters

April 2, 2013: signing of agreement between NAMA Forestal and the Swiss Government. US\$1,7 million year 2013-2014, possibility of increase in donation years 2015-2016 (additional US\$1,3 million)

1. Promotion of creation and sustainable growth of forests.

- Increase in technical assistance (greater number of extensionists).
- Intensive work on regularisation of title deeds for easier access to promotion instruments.
- Improvement and intensification of forest inspection and monitoring patterns.

2. Generation of carbon bonds in Chile's forestry sector.

- Determination of the real carbon capture contribution of Chile's native forests (specific country functions).
- Study of the demand for forest carbon bonds.
- Development of 2 typologies with their respective pilot projects.



Concretion of projects in climate change matters

March 20, 2013: approval of Chile's project regarding REDD+, Forest Carbon Cooperative Fund (FCPF), World Bank. Donation of US\$3,8 million for years 2013-2014-2015 with feasibility of requesting additional US\$5 million against results.

1. Promotion of creation and sustainable development of forests.

- Quantify and measure volume, biomass, carbon tonnage and other variables of loss of condition as forest associated with forest degradation.
- Identify, quantify and address forerunners of forest degradation (indiscriminate use of firewood, inclusion of livestock, fires) as actions of mitigation of greenhouse gases. Aligned with Law N°20.283.
- Increment forest extension patterns (technical assistance).
- **Intensify indigenous** participation and consultation programs that should be needed.

2. Carbon bond generation in Chile's forestry sector.

- Determination of reference levels (projected baselines) of forest carbon stocks.
- Adaptation, generation and implementation of international methodologies for validation of forest carbon projects fit for trading in global markets.
- Establishment of a carbon credit registration system compatible with Chile's present forest information systems.



- **Low technical development regarding degradation drivers.**
- **Shelter from risks and improvement of social and environmental benefits.**
- **Strengthening of capabilities.**
- **Success depends on the demand for participation on the part of potential beneficiaries.**

Final considerations

A country differentiation is sought, not of carbon bonds volume but rather of “boutique units” (to satisfy the sophisticated demand).

14

Aspects to be addressed are those of risk, safeguards through compliance with World Bank operating policies as well as other self-imposed requirements of the voluntary market.

13

Former capabilities demonstrated in monitoring systems.

12

There are basic international and national financing sources already committed

11

R-PP approved (March 2013). It is expected to have a medium-term (8-month) report as well as an R-Package approved in 18 months. R-PP was prepared and approved in 12 months.

10

Time period stipulated for the implementation of activities already defined (2013-2020).

9

1

Key responsible allies at national level identified.

2

Subnational-scale projects based on ecosystemic stratification.

3

Potential areas by type of activity identified.

4

Global contribution as regards definition, treatment and monitoring of degradation.

5

Analysis of causes of “non-afforestation”.

6

Based on existing regulatory and forest promotion mechanisms.

7

Practical experience exists concerning MDL and MVC projects, which showed additionality with regard to the local promotion instruments.

8

Previous carbon capture estimates are available (they need to be adjusted in accordance with improved knowledge).

Mayor información de la estrategia nacional de bosques y cambio climático



Los Bosques en la Mitigación del Cambio Climático

Estrategia de Bosques y Cambio Climático:
Plataforma de Generación y Comercio de Bonos de Carbono del Sector Forestal de Chile (PBCCh)



Estrategia de Bosques y Cambio Climático

Plataforma de Generación y Comercio de Bonos de Carbono del Sector Forestal de Chile

social and environmental benefits that this represents to the individual

0:06 / 2:54

<http://www.conaf.cl/nuestros-bosques/bosques-en-chile/cambio-climatico/>

Thank you



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Thank you

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