

The Role of Animal Production in Rural Development and Attaining SDG 8, “Decent Work and Economic Growth”

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The Importance of Livestock production and animal protein: the Western hemisphere perspective

Foto: Rodolpho Botelho.

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**BEEF
AGROINDUSTRIAL
SYSTEM
2019**

Agribusiness
turnover for
beef cattle
in 2019

157.42
US\$ billion

Inputs and services for
livestock production

18.91
US\$ billion

Total revenue
for livestock

32.32
US\$ billion

Industry inputs
and services

14.35
US\$ billion

Revenue of
Slaughterhouses

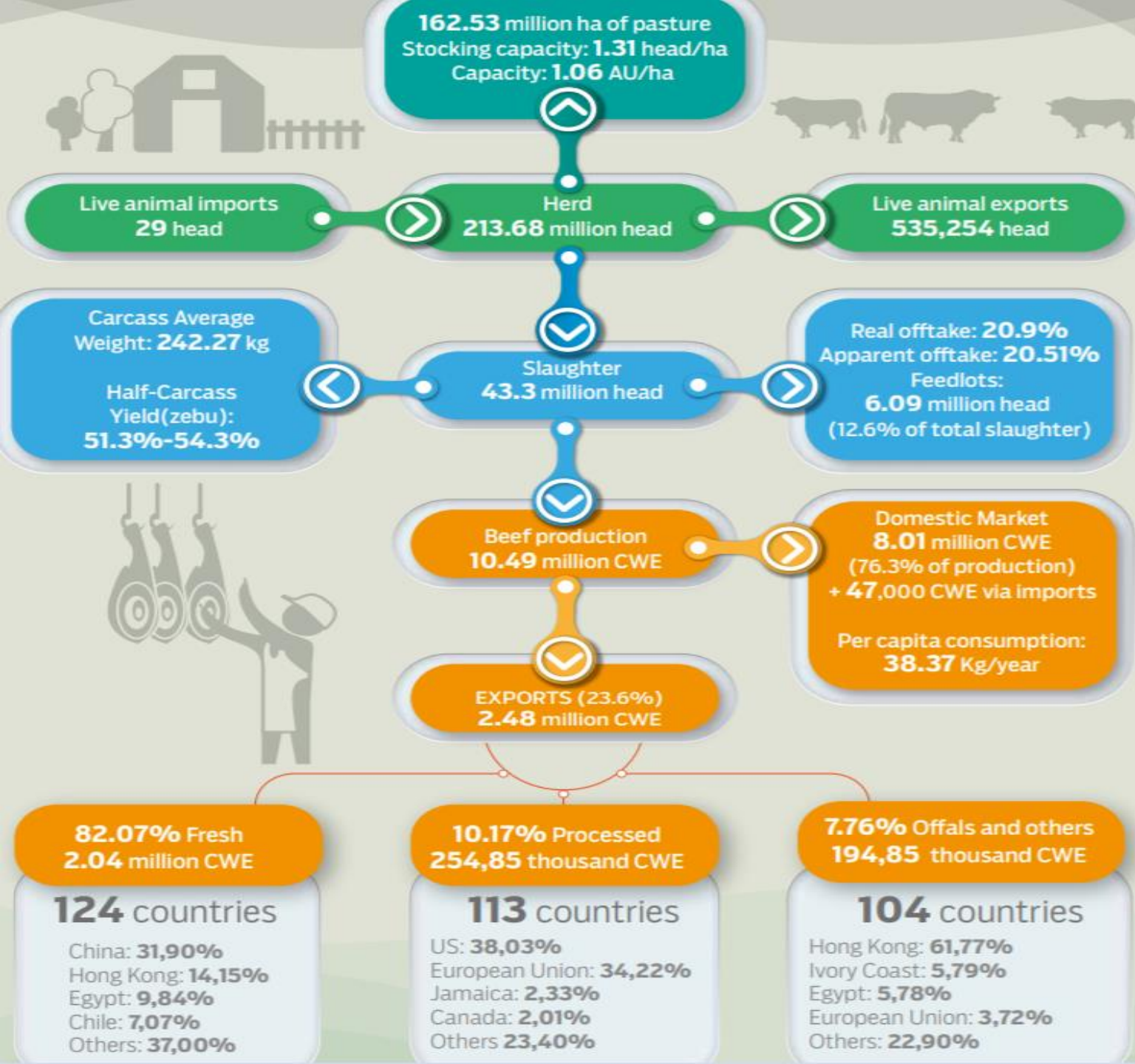
36.63
US\$ billion

Retail inputs
and services

5.630
US\$ billion

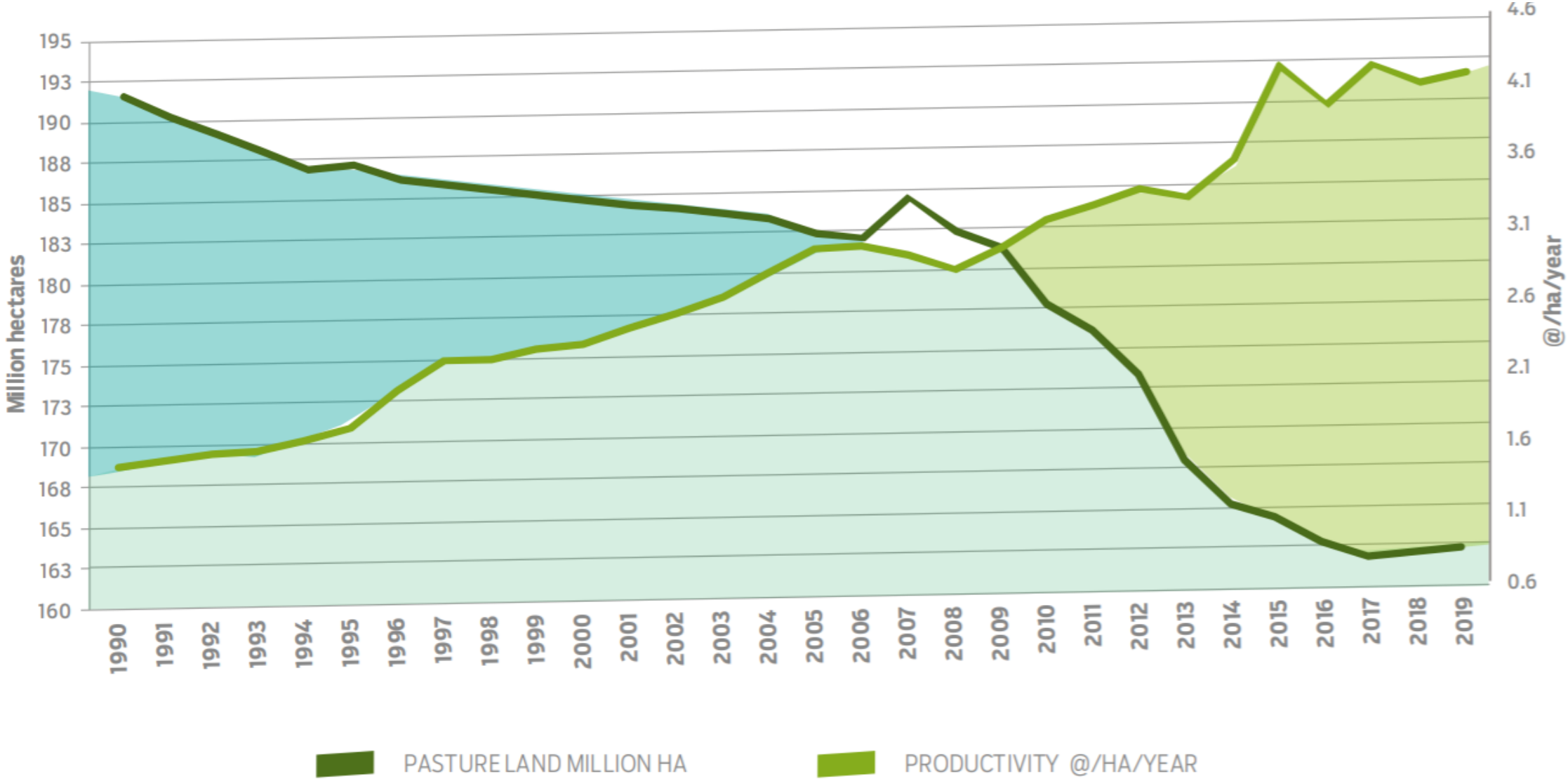
Total retail
revenue

49.30
US\$ billion



Source: Athenagro, Secex, Ministry of Economy, IBGE, Abiec prepared by Athenagro

Evolution of pasture and productivity



Source: Athenago. dados Agroconsult. Agrosatélite. IBGE. Inpe/Terraclass. Lapiq. Prodes. Rally da Pecuária. Map Biomass

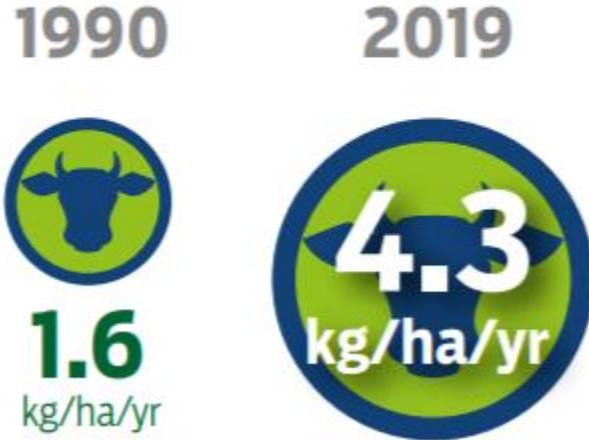


Productivity as a challenging solution

Productivity rose



In the period
productivity rose:



Beef production
also grew by

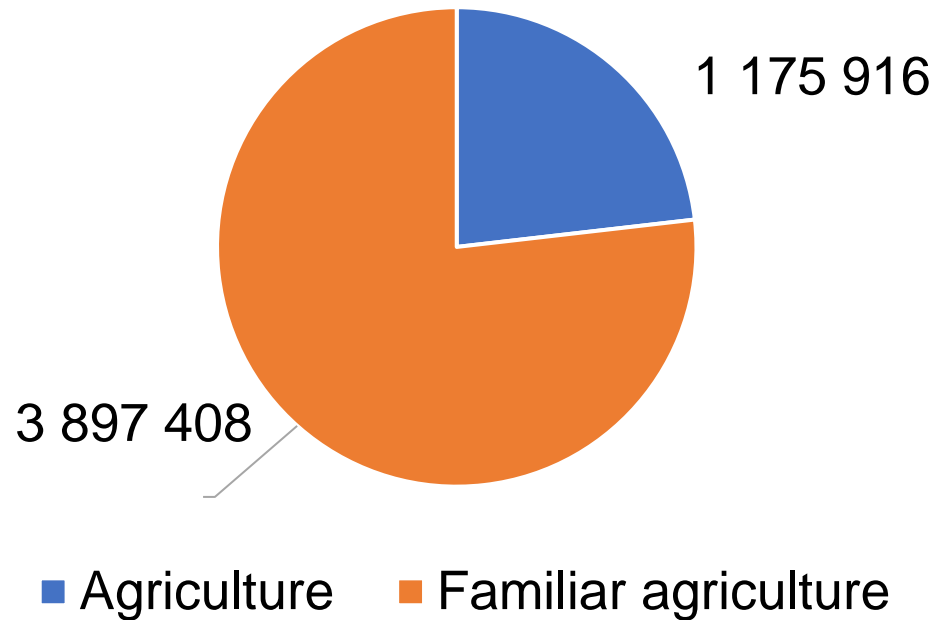


Source: Athenago, Agroconsult, Agrosatélite, IBGE, Inpe/TerraClass, Lapig, Prodes, Rally da Pecuária, Map Biomass, Rede Fomento

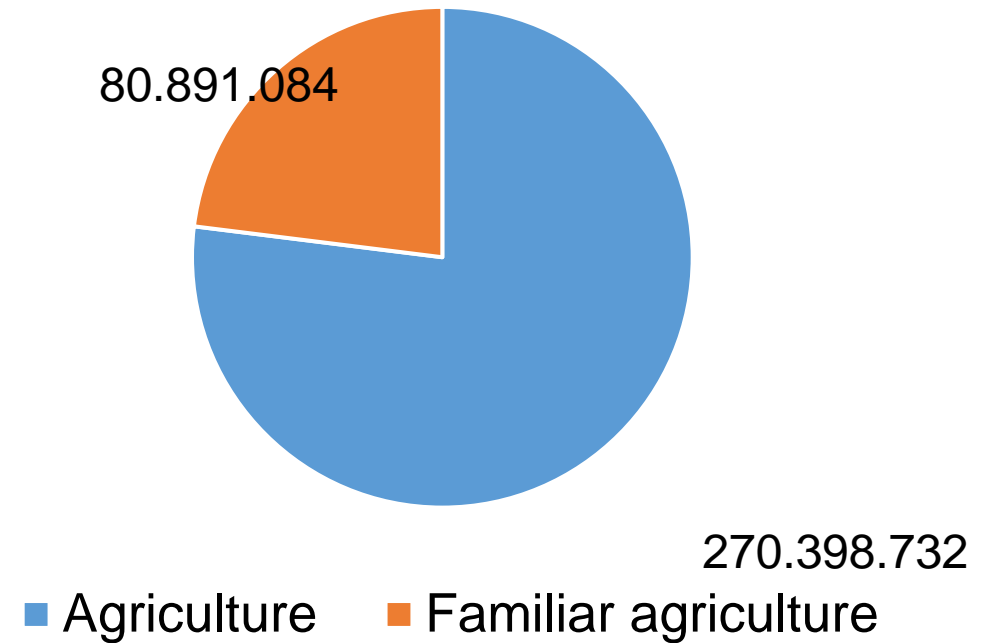


Agriculture areas profile in Brazil

Number of farmers



Agricultural Area in Hectares

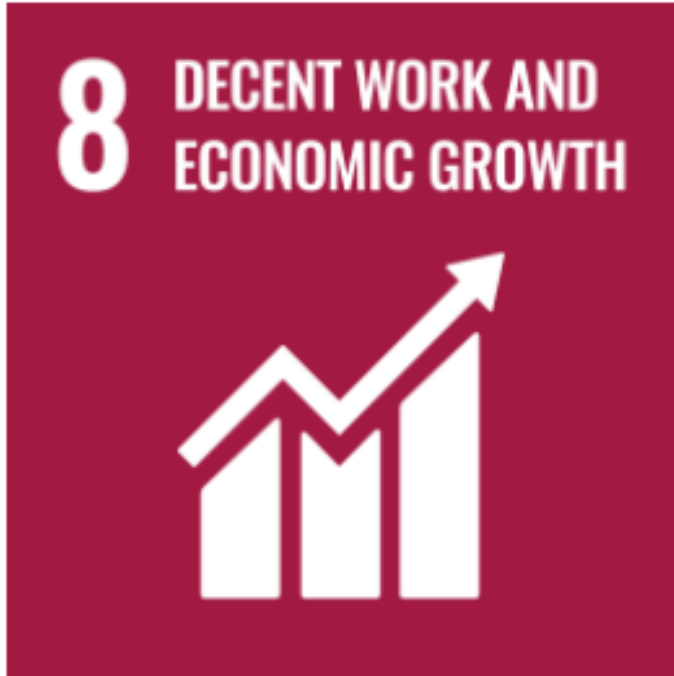


2.476.629 Livestock farms





Source: Censo IBGE/2017.



SDGs interdependency



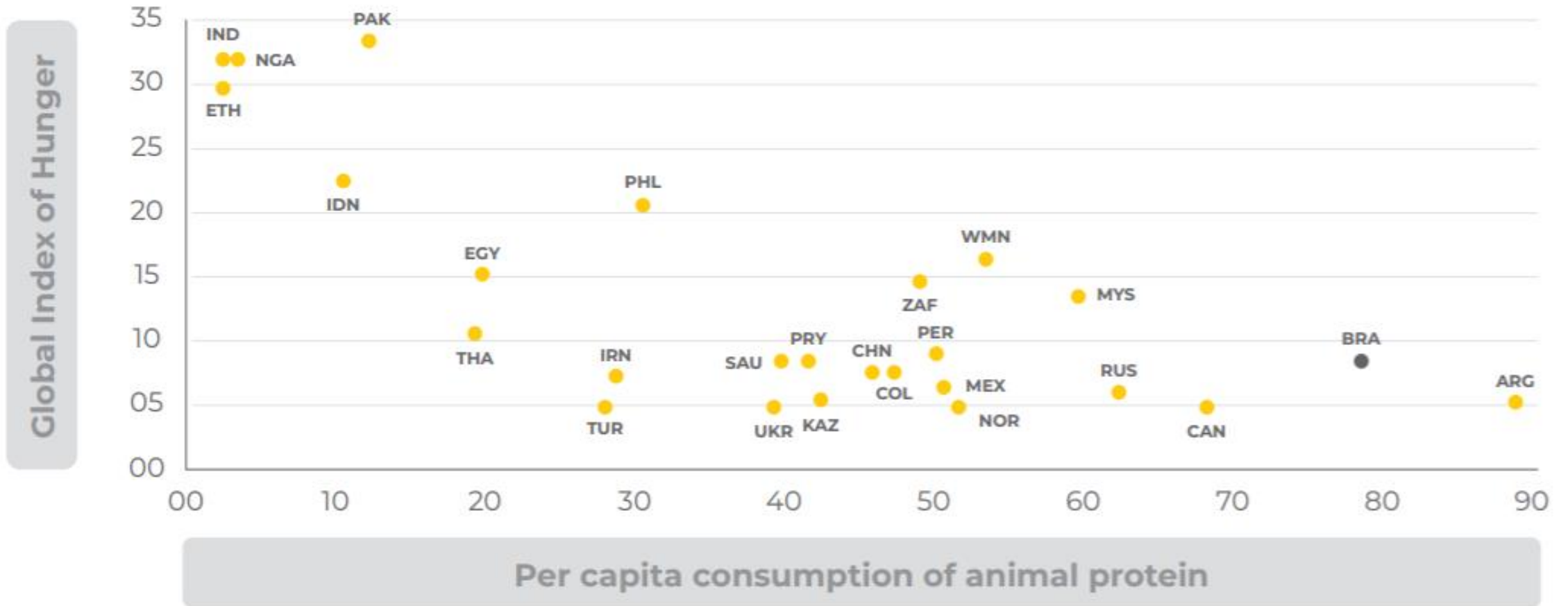
Average prices to consume the human needs protein amount from each source in selected countries (US\$/month)

| | Pork | Chicken meat | Soybean | Corn | Lentil | Chickpea | Pea | Eggs |
|---|-------|--------------|---------|--------|--------|----------|--------|-------|
|  | 25,97 | 15,91 | 118,37 | 48,00 | 58,33 | 138,07 | 202,78 | 20,24 |
|  | 41,17 | 40,07 | 84,04 | 193,50 | 150,00 | 129,55 | 116,67 | 33,33 |
|  | 61,71 | 17,14 | 48,80 | 88,50 | 123,33 | 80,11 | 111,11 | 11,90 |
|  | 59,69 | 45,80 | 84,04 | 118,50 | 270,00 | 112,50 | 111,11 | 33,33 |

Source: Based on data from local supermarkets, UNIFESP and carterwings'



Global Index of Hunger versus animal protein consumption (*per capita*)



Source: OCDE, Global Hunger Index and PNUD (2019)

¹Caterwings. "Meat price index-USD". Available at <<http://bit.ly/36yRFds>>



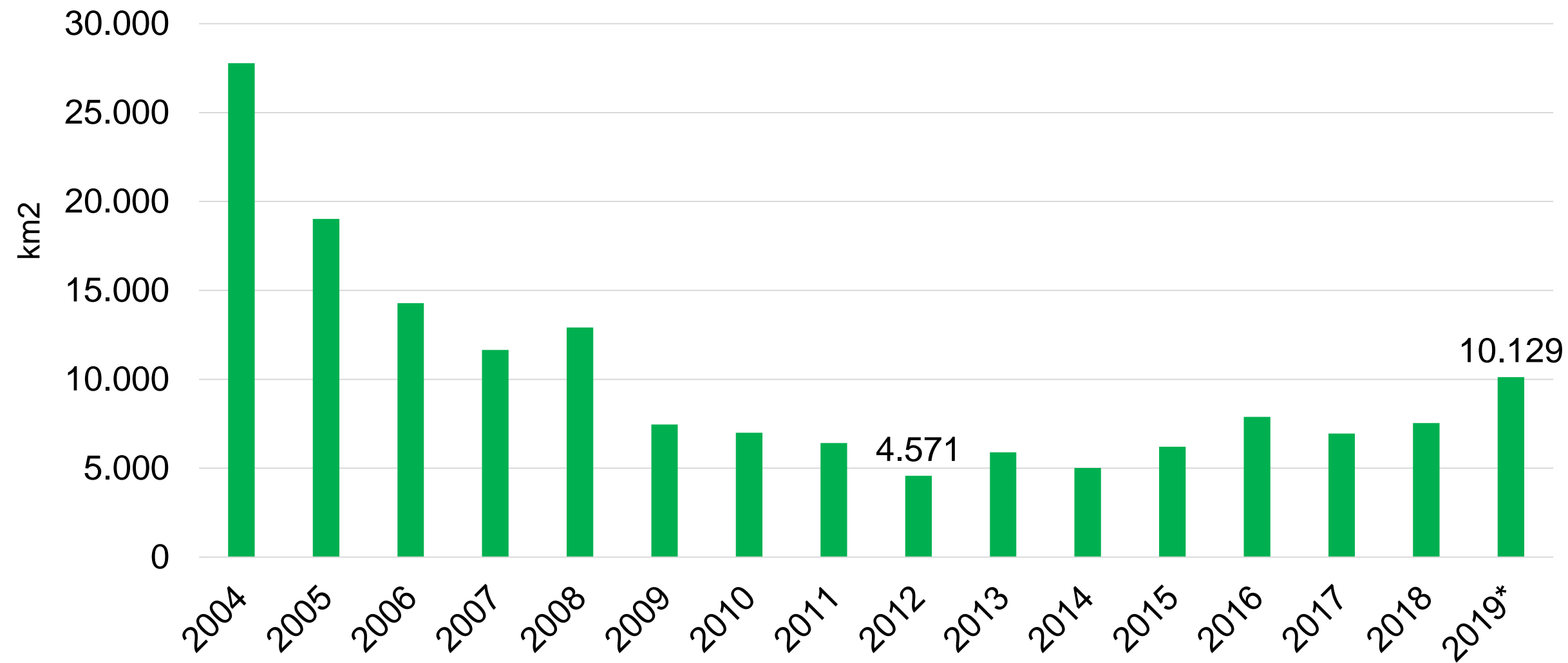
Low Carbon Agriculture Plan (ABC Plan)

| | Targets up to 2020 | Estimated reach up to 2018 | Total area up to now |
|---|----------------------------|-----------------------------|----------------------|
| Pasture recovery | 15 million ha | 10.44 million ha | 10.44 million ha |
| No-tillage | 8 million ha | 12.72 million ha | 32.88 million ha |
| Biological Nitrogen Fixation | 5.5 million ha | 10.64 million ha | 32.98 million ha |
| Integrated crop-livestock-forestry systems (ILPF) | 4 million ha | 5.83 million ha | 12.61 million ha |
| Planted Forests | 3 million ha | 0,783 million hectares | 7.84 million ha |
| Animal manure treatment | 4.4 million m ³ | 38.3 million m ³ | |

Sources: MANZATTO, C. V. (et. al). Mitigação das emissões de Gases de Efeitos Estufa pela adoção das tecnologias do Plano ABC: estimativas parciais. Embrapa Meio Ambiente. Jaguariúna, SP. 2020; MAPA, Diagnóstico da expansão da adoção da tecnologia de Tratamento de Dejetos Animais (TDA) no território brasileiro entre 2010 e 2019.



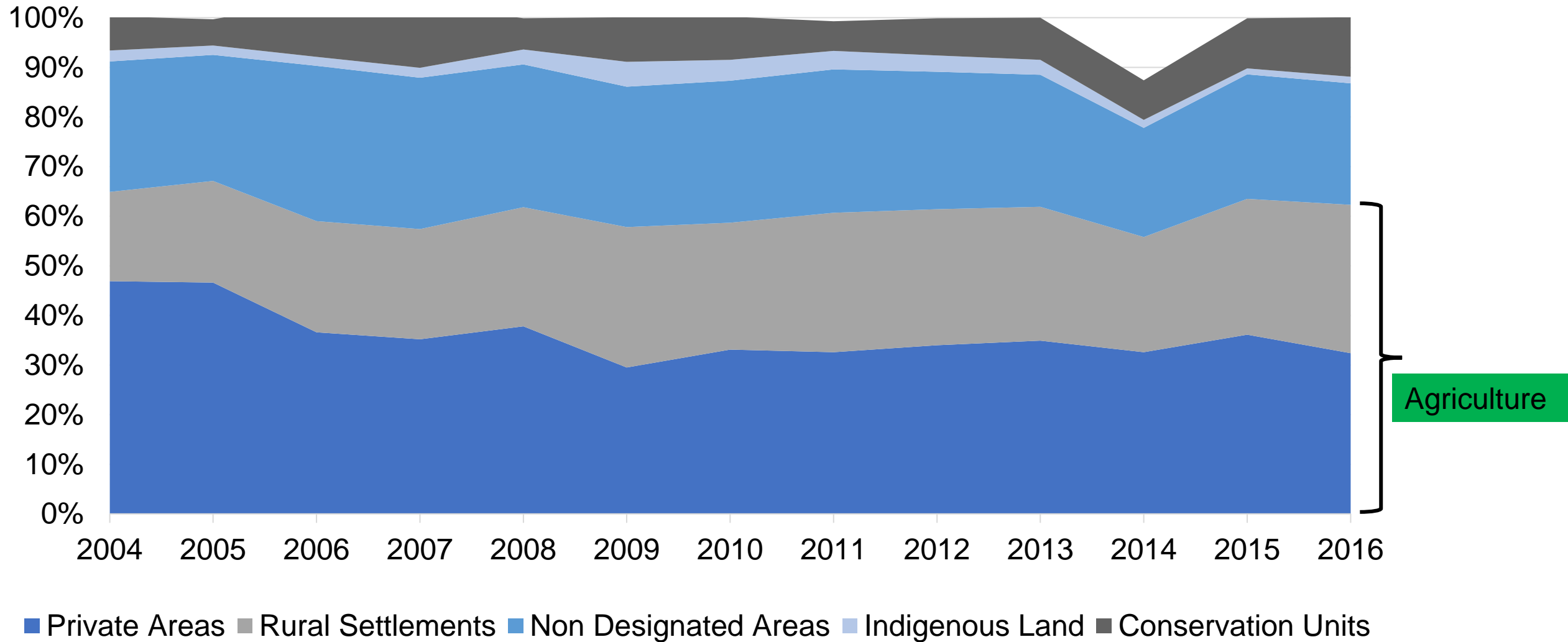
Amazon deforestation rates



Source: PRODES.



Amazon deforestation rates by land use category



Source: Ministry of Environment. PPCDAM 2016-2020.

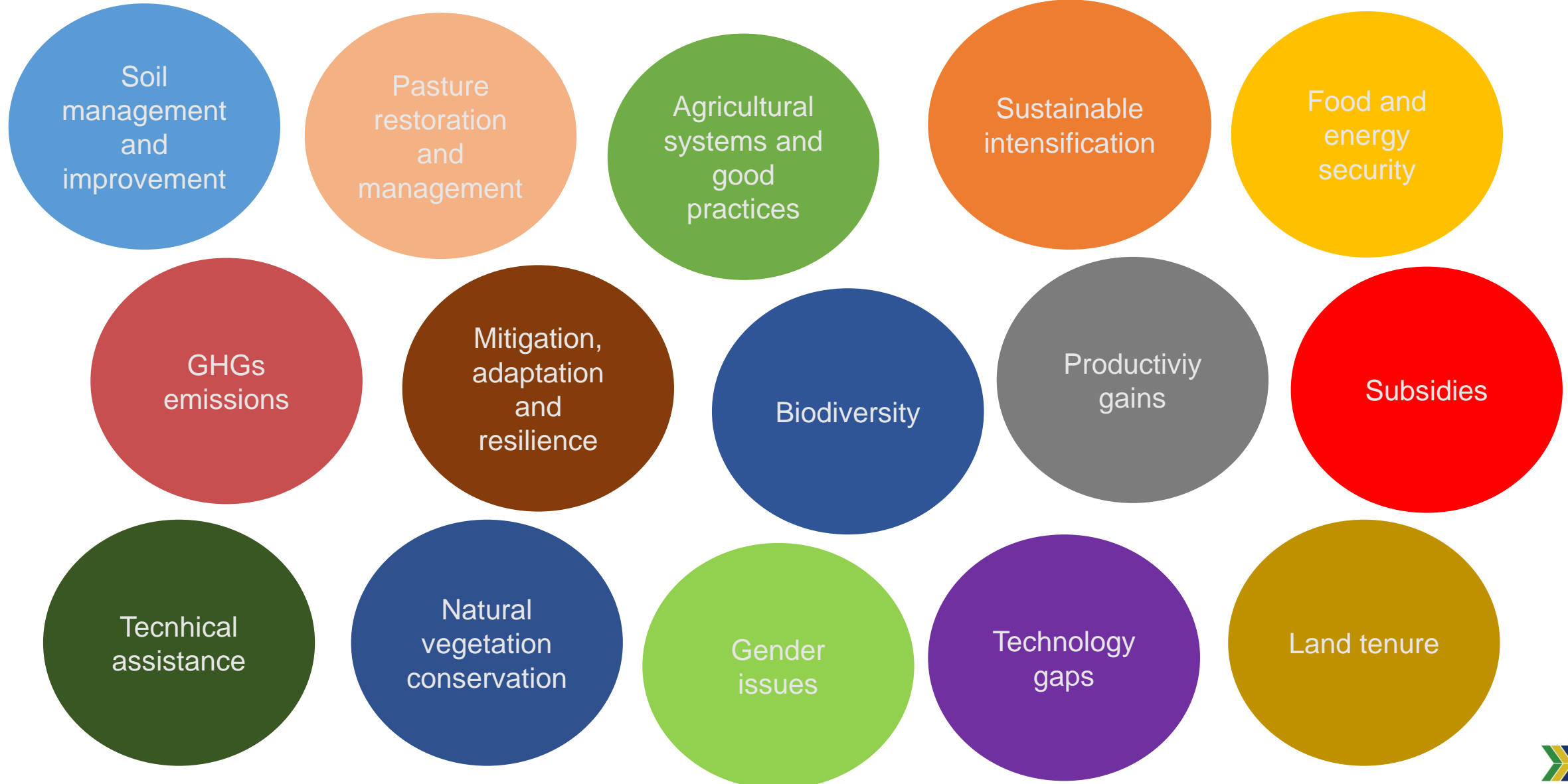


FAO principles of sustainable agriculture

- Improve efficiency in the use of resources.
- Conserve, protect and improve natural resources.
- Protect and improve rural livelihoods, equity and social welfare.
- Increase the resilience of people, communities and ecosystems.
- Develop responsible and effective governance mechanisms

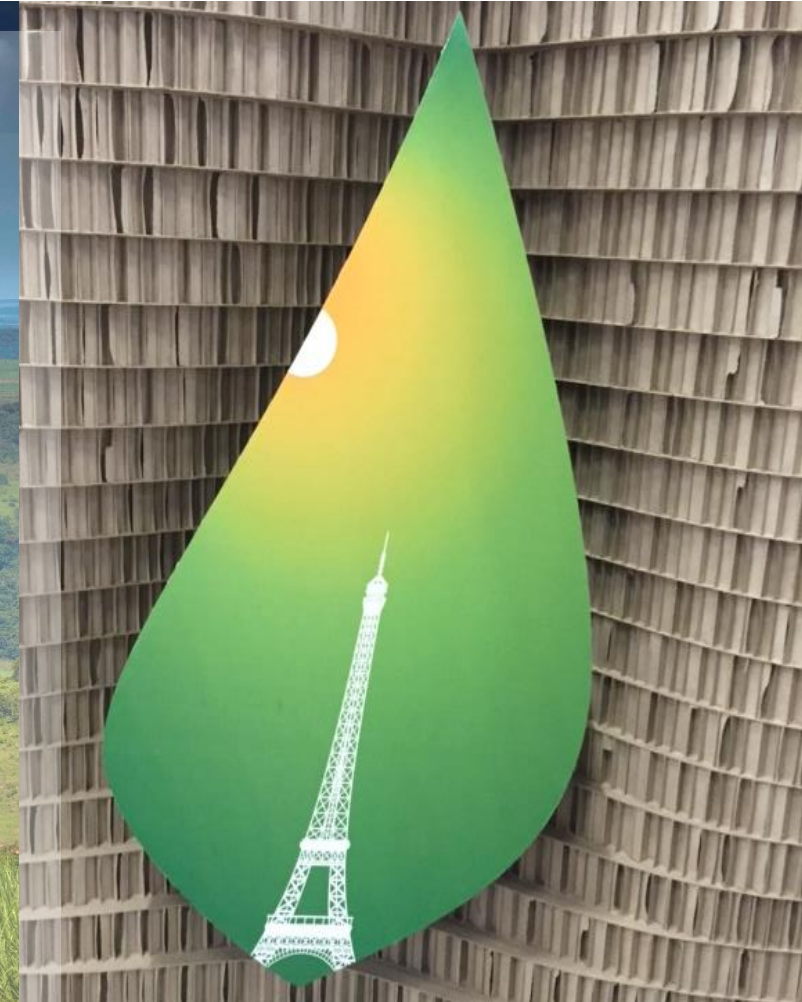


Defining Low Carbon/Climate Smart Agriculture

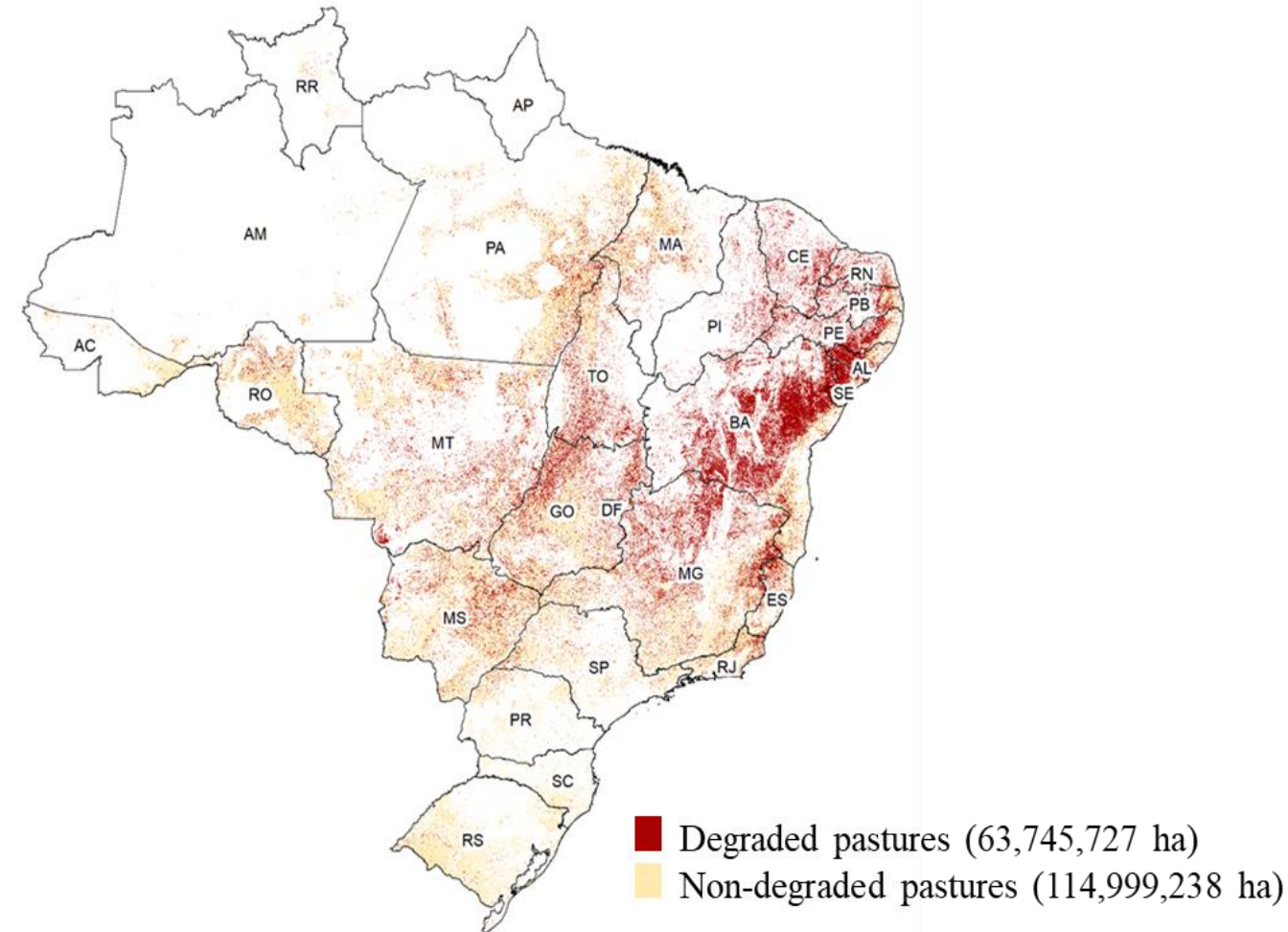


Brazilian NDC at the Paris Agreement (Land Use and Agriculture)

- Zero illegal deforestation in the Amazon by 2030;
- Full implementation of the new Forest Code;
- Compensate emissions from legal deforestation;
- Restore 12 million hectares of forests for multiple uses;
- Promote sustainable forest management;
- Restore 15 million hectares of degraded pastures;
- Encourage 5 million hectares of ILPF;
- 18% of biofuels in the energy matrix.



Pasture degradation: liability or asset?



- In 2018 the degradation of pastures generated losses equivalent to R\$ 7,23/@ produced, due to expenses with reforming pastures in an advanced stage of degradation.
- These losses can reach up to R\$ 15/@ which reduces the revenues of the producer, requires more time to finish the animals, keep a degradation process on evolution and generate GHG emissions.
- The costs to recover degraded pastures relies on several factors as the level of degradation, the access to inputs and specialized labour, the cost of capital, among other. On average, the costs to promote pasture recovery ranges from R\$ 3,000 to R\$ 6,000 per hectare, (implementation and maintenance), depending on the specific situation of the area.
- Pasture degradation creates several impacts, from socioeconomic to environmental.



The “3 S” Surrounding Livestock Worldwide

Food Security



Food Safety



Sustainable Development



Adapted from Marcos Jank.



Innovation and jobs towards promoting sustainable development in livestock production

- Pasture recovery and management are essential to enhance productivity
- Livestock intensification is key to allow more beef in less area and time
- Native vegetation conservation on farms
- Adoption of good practices and Animal welfare practices
- Integration of crop, livestock and forest
- Innovation at the farm level requires technical assistance and rural extension.
- Moreover, innovation requires access to credit and innovative financial mechanisms
- Around 145 Parties considered agriculture at their NDC at the Paris Agreement
- Promote sustainable production on a continuous improvement basis is a trigger to support SDG 8, 2, 12, 13
- Supporting small scale producers is fundamentally important to avoid verticalization and other social issues



Questions?

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Foto: Rodolpho Botelho.

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