# The Climate Pathway Project

Expected GHG† reductions from business as usual (BAU) through prioritised actions:

Priority Actions

- Conservation and maintenance of the state's forest assets
- Sustainable forest management
- Land tenure regularisation
- Expansion and improved management of protected areas
- Commercial reforestations
- Restoration of the forest landscape
- Reduction of the risk of forest fires
- Good agricultural practices to increase productivity in already cleared areas
- Protection of secondary vegetation
- Recovery of degraded pastures
- Crop-Livestock-Forestry Integration
- ∗ Biofuel production and consumption
- •••• BAU scenario
- •••• Net zero goal

Y-axis: $TgCO_2e$‡ (350, 300, 250, 200, 150, 100, 50, 0, −50, −100)
X-axis: 2020, 2025, 2030, 2035, 2040, 2045, 2050
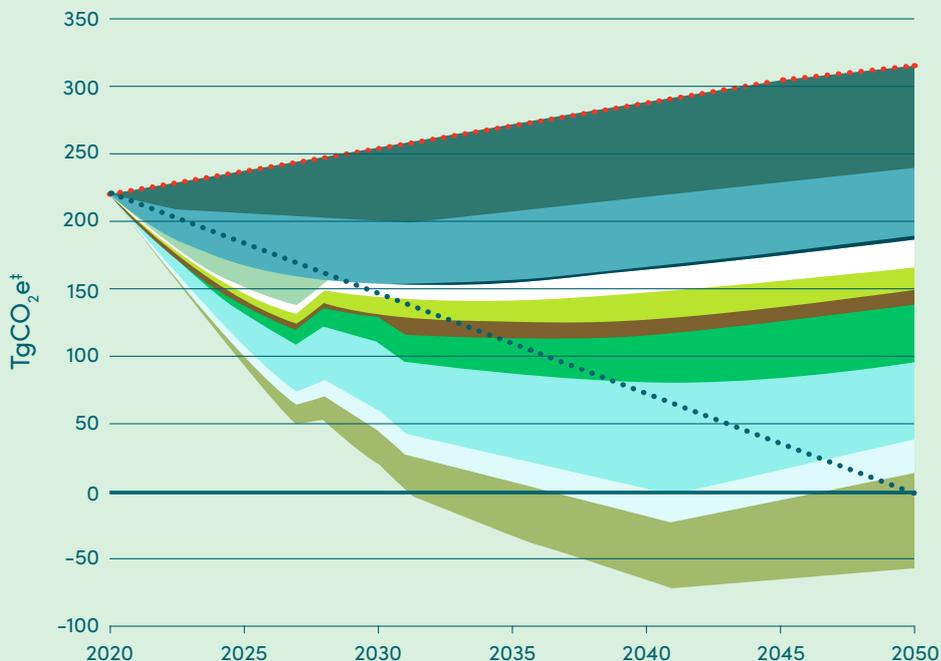
Business as usual emissions (2050) per sector ($TgCO_2e$):

- Forestry & Land Use **108**
- Energy................................. **2**
- Transport.........................**18**
- Agriculture................................. **172**
- Industry...........................**13**
- Waste **2.5**
- RCI§...**0.63**

Total
316
$TgCO_2e$

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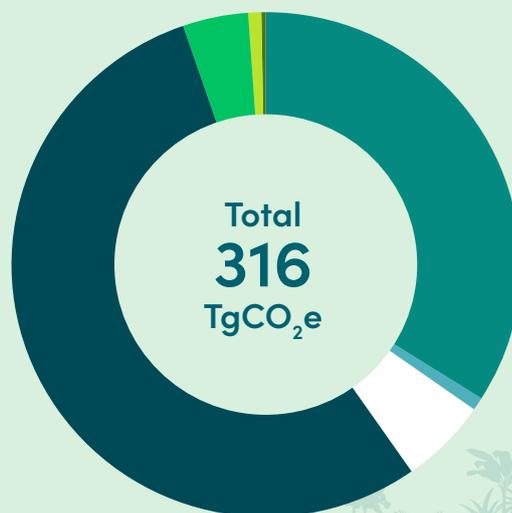
† GHG = greenhouse gas.
‡ $TgCO_2e$ = Teragrams of carbon dioxide equivalent, 1 Tg = 1 million metric tonnes.
∗ This action was selected after the modeling phase and is thus not part of the graph or other analyses.
§ RCI = Residential, Commercial, Industrial.
The above priority actions for decarbonisation were selected by the Government of Mato Grosso in the development of their state-level pathway.

Brazil

Mato Grosso, Brazil

GHG emissions target chosen by Mato Grosso:
Net zero emissions by 2050

Economy:
Mato Grosso is Brazil's largest producer of soy, corn, cotton and cattle, and has growth potential in the sectors of agribusiness, tourism, fisheries, creative economy and jewellery.

The Climate Pathway Project supports state and regional governments to develop a transformational process, or 'pathway', to reducing emissions while supporting economic and social development, in collaboration with local communities and businesses.

A decarbonisation pathway for Brazil's agribusiness powerhouse: Mato Grosso

In February 2021, **Rolf Bateman** (Engagement Coordinator – Brazil) and **Natalie Orentlicher** (Knowledge and Learning Manager) from the Climate Group spoke with **Maurício Philipp** (Climate Change Coordinator) and **Caroline Chichorro** (Environmental Analyst) from the Secretariat of State for the Environment (SEMA; in Portuguese) of the Government of Mato Grosso (Brazil) about the state's work with the Climate Pathway Project.

Here's a summary of the conversation.

Maurício Philipp

Priorities and context in Mato Grosso: land use change, agriculture and livestock farming

Natalie: **Why were the priority actions chosen and why are they important for the state?**

Maurício: The actions reflect our reality in rural areas and also where our highest emissions are. In Mato Grosso, more than 95% of greenhouse gas (GHG) emissions are related to land use change, agriculture and livestock. Not coincidentally, the priority actions reflect these emission sources, but also the potential for GHG removal. There is also an action on energy (biofuels), which has a very strong connection with agriculture and livestock. They are very relevant to address the problem and reduce our emissions.

Caroline Chichorro

Managed pastures, integrated systems and carbon sequestration

To give some context, Mato Grosso is home to the largest cattle herd in the country – resulting in high methane emissions. But, on the other hand, it has a potential to remove carbon from the atmosphere through the establishment of well-managed pastures and also through integrated systems for crops, livestock and forests. Thus, the potential for reducing and even neutralising emissions from livestock farming is translated into the actions designed.

Forest remnants

Another challenge the state faces is the maintenance of forest remnants and 60% of the territory is covered by indigenous ecosystems. It's an important challenge to maintain these remnants because the forest is fundamental for evapotranspiration, soil protection and the resilience of productive systems.

Rolf Bateman

Restoration and forest management

There are other forest restoration actions in large areas that are abandoned. We have actions related to forest management, we maintain forest stocks and we open clearings and obtain mature trees without cutting them down. So the forest structure has all the conditions to regenerate, to generate benefits to the communities and at the same time to remove carbon from the atmosphere.

Natalie Orentlicher

Fire reduction

Another key action is the reduction of forest fires. This has been a major challenge for the state. We have a very dry season, with a pronounced water deficit, so developing a fire prevention system in that season is fundamental. Logically, this is also related to deforestation and pasture management.

Pantanal Mato Grosso

The involvement of the private sector is crucial

Rolf: **How important is the private sector for Mato Grosso's emissions reduction pathway?**

Maurício: We understand the importance of the private sector because the vast majority of Mato Grosso's land is privately owned and has been for a long time. Any implementation of these actions requires mobilisation of the private sector.

In our case, this conversation is taking place in the context of the Mato Grosso Climate Change Forum. The development of the State Climate Change Policy was done with the participation of agricultural actors, indigenous peoples, non-governmental organisations (NGOs) and other Secretariats and academic institutions. This is a conversation that has been going on for some time.

These stakeholders must be involved throughout the whole process. From the baseline development, to the planning or design phases of the proposed actions and then in the implementation phase, which will be the development of public policies and implementation of actions.

So the participation of the private sector is fundamental. If today the emissions are mostly in these areas, the solutions that were designed should also be there. There is potential for reducing emissions, fixing carbon in the soil, sustainable agriculture and livestock farming, and maintaining forest reserves that are in private areas. It is essential that all actors are involved, and the private sector has a big role in this.

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If today the emissions are mostly in these areas, the solutions that were designed should also be there.

How to link the pathway with other policies

Natalie: **What is the PCI strategy and how does it link to the pathway? Are there other policies related?**

Caroline: The PCI is the Produce, Conserve and Include strategy. The strategy has developed a set of targets that were launched in 2015 at COP21. This set of targets aims to work on good practices within the state to create a low-carbon economy. In general, the PCI has objectives linked to the recovery of pasture areas with low productivity, the extension of forest areas and the maintenance of vegetation cover.

The objectives are divided into three areas: production (crops and materials), conservation (forests) and inclusion (family farmers and traditional populations). Our Secretary requested that we strive to align the objectives set out in the decarbonisation pathway with the objectives of the PCI strategy. The technical consortium of the project has worked hard to seek this alignment.

Project workshop in Mato Grosso

The level of ambition of the PCI is very high, as is the design of the pathway actions so that the PCI objectives match the pathway actions.

With respect to other policies, the Rural Environmental Registry and the regularisation of land titles are also related to the priority actions of the pathway. There are also other related actions, such as the implementation of the Climate Change Policy and the State REDD System, as well as the Low Carbon Agriculture and Sustainable Rural projects. We need to talk about all of this so that the implementation of these actions is effective.

Rolf: **How do the two strategies work in the state and how does this short-term planning work?**

Maurício: The director of the PCI, Fernando Sampaio, is always invited to promote this alignment. There is no logic in having objectives that are very similar and placed on two tracks. There has to be an articulation at the strategic level to communicate this. The PCI already has a strong appeal.

The project could even subsidise it in this sense, it can help on the carbon issue, on emissions and removal factors, things that are not clear within the PCI. This convergence of objectives is fundamental, and we can work with data from both projects.

Another issue we also have to consider is that we anticipate the creation of the Sectoral Mitigation Plans and the State Greenhouse Gas Mitigation Plan within the State Climate Change Policy. It makes sense for the project results to subsidise these mitigation plans. In this way, we can translate the results of the Climate Pathway Project into a formal public policy document, published in the Official Gazette.

Amazon rainforest, Brazil

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Lessons learned and advice

Natalie: **What lessons and advice would you highlight from the process of developing the pathway?**

Caroline: The main lesson learned is the issue of participation of key actors – both mobilising people and involving different sectors in the pathway development. **Here in the state we have a very active State Climate Change Forum, so for us it was not so difficult.** Through the exchange of experiences during the peer forums we participated in, we could see that it was not so easy for other states, it was not easy to make this commitment and have people participate in all stages.

Another very difficult problem was that we didn't know where to look or how to access various data that was very important for building our baseline. So this is something that states have to take into account.

In this sense, consultants were critical, because they know where to look for this information and how to access it. For example, sometimes we knew that the data was there, but we needed diplomacy with the institutions to be able to look for that data and also know the people. For the states that are going to start the process, this is a concern that has to be on the radar.

Maurício: I would recommend other subnational governments to **start this conversation with civil society and key actors on the concepts of climate change principles, REDD and others. From the beginning of this conversation to the first projects, till now, it's been around seven years**, so this mobilisation process is critical.

It's a big effort and learning process to build the baseline for the pathway. I think it's a very reliable baseline because the effort was huge, and we even discovered that we needed to develop filters to account for the area of land use change. So it's an important legacy of the project **and it has to be very solid and robust because it will be the basis of the projection from 2030 to 2050. It's the basis for the whole development of the project.**

Soybean harvesting, Mato Grosso

Next steps

Rolf: **What are the next steps for the state of Mato Grosso?**

Caroline: The priority now is to plan the implementation of these actions. More than defining what the actions will be, we have to think about how we are going to implement them. For those who are going to start building the pathway, it is important to think about all the phases of the project.

In addition, we must consider how to finance the implementation of the pathway, because we know that the cost will be high, and we have to analyse where the resources will come from.

Maurício: The implementation strategy must be well planned, involving human resources, technical assistance and rural extension, identification of funding sources and review of domestic credit.

But the big challenge is to create a favourable environment for this to happen. This is not so simple. New projects are needed to reduce bottlenecks and improve the implementation of these actions.

We have to start, and start somewhere, even if it is restricted to an area where there is more technical assistance. We are used to the challenges, so now it is a question of rolling up our sleeves.

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