The challenge

The Brazilian demand for fuel in the transport sector has an annual growth rate of about 5%. Even with falling commodity prices and the difficult economic situation in Brazil, prices for fuel are increasing. This is due to the fact that most goods are being transported by road and passenger traffic is increasingly being realized by airplanes. Additionally, more and more remote cities are being included into the national air traffic system, which bears logistic challenges. Long transportation routes for fuel needed in airplanes, boats, ships, trucks, cars and motorbikes cause high costs and environmental damage. Even with an increasing production of ethanol and biodiesel, the growing demand can hardly be satisfied by biofuels only.

Our approach

Fuels produced via wind and solar energy offer a possible solution towards climate neutral transport. These fuels are particularly interesting for segment in which electric vehicles will be irrelevant for the time being. Brazil offers excellent conditions for alternative fuels: high potential for photovoltaics, wind, and other renewable decentral energy sources which are not only climate friendly, but also very cost efficient.

Brazil has a high potential of renewable power combined with a rapidly increasing fuel demand. Germany offers know-how for the production of climate neutral alternative fuels. The project’s goal is to create an international reference model for the production and application of climate neutral alternative fuels for aviation and other transport segments apart from electromobility. Core element is a pilot project in Brazil to prove feasibility of production and application of those fuels. Experiences will be documented systematically and subsequently fed into the international debate on decarbonisation of transport. Partner institutions are the Brazilian Ministry of Science, Technology, Innovations and Communications (MCTIC), and the German Aerospace Center (DLR). A first stage of the project pursues theoretical proof of feasibility, concept elaboration and the preparation of relevant actors. Throughout the second stage, these actors realize the pilot project, findings are internationally disseminated.
Multiplier effect

The project focuses on linking Brazilian institutions and companies closely to the technology development, them using their own financial and non-financial resources. In this way the necessary conditions will be set up to embed the production and use of climate neutral alternative fuels in Brazil in the long term. The proof of concept under real conditions in Brazil (i.e. outside of a laboratory), that the application of synthetic fuels produced via renewable power is economically feasible, unlocks a new climate neutral fuel option for aviation and other transport modes apart from electromobility (e.g. marine transport). The project’s impacts are of international outreach and contribute to the decarbonisation of transport, initially in Brazil then globally.