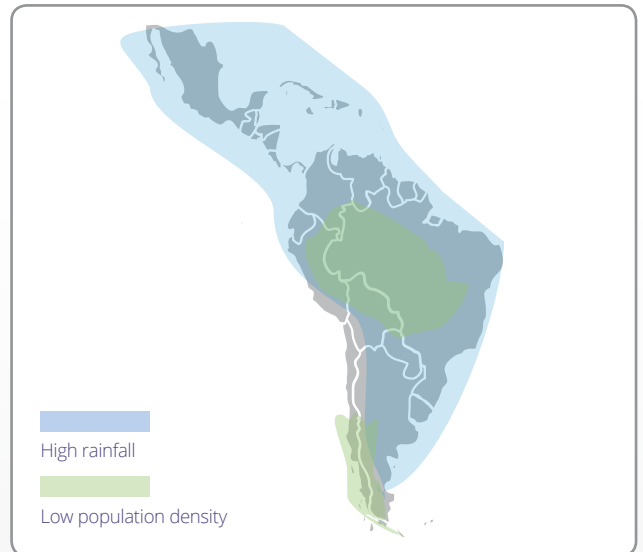


THE VALUE OF C-BAND IN LATIN AMERICA: CURRENT ADOPTION

C-band is of particular importance in Latin America, which is one of the main markets of C-band VSAT services. This can be attributed to two main factors:

- ▶ **Limited terrestrial infrastructure** leads to high reliance on VSAT communications. C-band allows for coverage of large areas of the continent, making it valuable in **remote areas with low population density**
- ▶ Large proportion of the continent is characterized by **high rainfall**. C-band's higher resistance to rain fade makes it crucial for services requiring **high availability**



Sectors relying on C-band include, among others:

Mobile Backhaul



C-band offers reliable backhaul for mobile networks in remote areas and provides capacity for large regions

Oil and gas



C-band offers reliable connectivity to exploration sites including offshore platforms

Humanitarian Programmes



C-band offers connectivity for disaster management in remote areas

Broadcasting



C-band is used to broadcast more than 1300 TV channels in Latin America

Air navigation and meteorology Services



C-band is used for networks which require wide coverage and high reliability

Maritime



Global coverage is crucial for vessels operating in remote regions or on long routes, moreover C-band is considered of increasing importance for large vessels

HOW TO EVALUATE SPECTRUM? THE EXAMPLE OF C-BAND

IDENTIFY
PLAYERS

IDENTIFY
PRODUCTS AND
SERVICES

ASSESS
PRIVATE AND
SOCIAL VALUE

AGGREGATE
AND FORECAST

- ▶ Consider the **wide range of service providers** and the **diverse user base**: map all stakeholders involved in the C-band ecosystem, such as **service providers** (e.g. satellite operators) and users (e.g. firms, public authorities, international organisations, NGOs). Analyse the **sectors** (e.g. oil & gas, broadcasting, mobile backhaul) and **regions** in which these players operate
- ▶ **Identify the products and services**: understand the variety of products and services supported by C-band - identification of **products and services offered by service providers** (e.g. access to networks to VSAT equipment) and their impacts on the **activities of C-band users** (e.g. tele-medicine, oil and gas extraction, financial trading platforms)
- ▶ Analyse how C-band supports **businesses** and the **economy**, as well as how the services/activities generate social benefits. **Private value** includes both the revenues from services offered to users, as well as the economic advantages derived by users from activities relying on C-band. **Social value** includes the broader benefits for society resulting from C-band-enabled activities (e.g. emergency communications, humanitarian aid, etc.). **Climate and regional specificities** are central to capture the value of C-band, as they limit the number of **viable substitutes** based on the unique **characteristics of C-band** (worldwide coverage and resilience to rain fade)
- ▶ Comprehensive evaluations should aggregate the value of C-band for the various **business players** and the **society** across **different sectors**. The appraisal of C-band should also quantify the value that will **continue to be generated** through the time for all stakeholders involved

Studies supporting C-band reallocation for mobile use present an incomplete analysis, when they fail to assess existing users and operators, the services and activities supported by C-band and the benefits provided through the time