



# Timor-Leste

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## Overview

Timor-Leste is the newest country in the world after gaining independence in May 2002 and enrolling as the 191st UN member a few months later. The country domain for Timor-Leste remains disputed between “.tp” (Timor Portugal) and “.tl” (Timor-Leste). Portugal ruled the territory for almost five centuries. The colonial era was followed by a controversial period of Indonesian occupation beginning in 1975 and lasting for more than two decades. The occupation culminated in a UN-sponsored referendum held in August 1999 when the majority of the people rejected the Indonesian proposal for autonomy, opening the way to independence. The post-referendum destruction of the country caused enormous human suffering and forced more than half the population to leave their homes. It also cut deeply into the country’s economic and social infrastructures. Approximately 80 percent of the schools and clinics were completely or partially destroyed. The telecommunications and media facilities were not spared either, with the state radio and television stations, local newspaper offices and most of the 12,000 telephone land lines burnt or damaged. So, in many respects, Timor-Leste is now rebuilding from the ground up.

The first national human development report places the nation as one of the world’s least developed and poorest countries. Incomes are low, and per-capita GDP is estimated at only US\$478. Very few people have received adequate education, and more than half the population is illiterate. Poor nutrition leads to more than half of all infants being underweight. And the country is still suffering from the destruction and trauma that followed the national vote for independence in September 1999. The elected government has devised plans and initiatives for rebuilding the nation. Reconstruction and community development are the top priorities.

Tetum is the language of the people of Timor-Leste. Unfortunately, it is not fully developed in terms of structure and grammar. The National University of East Timor is attempting to restructure the language as well as developing

a Tetum–English–Portuguese dictionary. The government has decided to use Portuguese as the official language. Portuguese will likely continue to be widely used in the country over the next five to ten years. There is no website which is published completely in Tetum. The local newspaper *Suara Timor Lorosae* runs a website with content in Tetum and three other languages: Indonesian, English and Portuguese.

## Infrastructure

ICT is new to Timor-Leste: the first computer arrived only in the early 1990s. As the communications infrastructure had been destroyed during the 1999 riots, the UN Mission in East Timor established an emergency communications system that was operated by Telstra, the Australian telecommunications corporation, in 2000 to facilitate communication throughout the territory and to serve the peace-keeping force, UN personnel and expatriates working in the country.

The lack of infrastructure limits ICT penetration. The government realises that having access to reliable information and communication services is crucial for promoting agricultural productivity and poverty reduction and for supporting private sector development. It established a telecommunications corporation named Timor Telecom in March 2003 in a joint venture with Portuguese Telecom and the private sector. Timor Telecom is entrusted to provide all telecommunications services to the population, including building the infrastructure (voice and data) and providing Internet connectivity. The infrastructure development plan emphasizes priority for economic development and a strong commitment to poverty reduction, but the first priority is to restore or establish essential facilities, telecommunications systems and public services. Although significant progress has been made in restoring infrastructure, including that of ICT, the quality and level of service remain woefully

inadequate. ICT is currently available mainly in cities such as Dili. In terms of power supply, the Dili area receives about 24 hours of electricity each day from the power grid. However, the rest of the country receives about 6 hours' supply each day and sometimes even less because the damaged infrastructure has yet to be fully restored. Some remote areas do not receive any electricity supply at all.

The ICT infrastructure being rebuilt includes the essential facilities of radio communications, postal services, telecommunications facilities and various support services. Radio broadcasts now reach almost 90 percent of Timorese homes providing important agricultural and development information as well as entertainment. Newspapers also play an important role in disseminating information and knowledge to the people, but they are available only in the cities.

The telecommunications infrastructure and related services have expanded rapidly since Timor Telecom took over as the principal operator. The telecommunications network has been expanded to cover all the districts in the country, serving all the major towns. Cellular mobile services are now available throughout the countryside and are fast growing into a truly national system. Timor Telecom has exclusive rights to provide fixed-line local and long-distance (including international) telephone services, GSM mobile services and Internet services for 15 years until 2017.

Most of Timor Telecom's customers make use of prepaid services. There are approximately 30,000 cellular phone users with 28,000 of them opting for prepaid services. Besides this number, there are another 2,000 land-line users. The company has made arrangements to provide its customers with roaming services in three countries: Portugal (via TMN, Optimus and Vodafone), Indonesia (via Telkomsel) and Australia (via Optus).

SMS has become popular among cellular phone users in the country, with an estimated 28,000 users. Users can send messages to the same three countries of Portugal, Indonesia and Australia, besides locally.

There are no precise records of the number of computers installed in Timor-Leste. The Ministry of Post and Telecommunication estimates that there are around 3,800 units. The total number of Internet users is estimated at 8,000. Timor Telecom provides Internet access via dial-up and leased lines offering a maximum bandwidth of 128 Kbps. The UNDP office in Dili operates its own Internet access service, which it provides to the staff of various UN agencies and selected donor organisations based in the country. No telecentres have been set up in the country, but there are half a dozen cyber cafés in Dili. The cost of Internet access at these cafés ranges from US\$3 to \$8 per hour. Most of the customers are government personnel, students and businesspeople. They use the cyber cafés to email, chat and download information from the Web. The offices of the World Bank and Banco Nacional Ultramarino provide free

Internet access to the public. The local World Bank office maintains the only e-conferencing facility in the country.

The use of computers and networks is becoming more common in educational institutions and among students. ICT facilitates access to journals, library services and databases, as well as scholarly and scientific exchanges. The most urgent concern today is the affordability and accessibility of ICT services. The current high cost of Internet access has prevented many people from going online.

In terms of media services, there are half a dozen radio stations broadcasting out of the capital, Dili, on both AM and FM frequencies. The government operates one of the radio stations; the other five are run by NGOs and private broadcasters. One of the radio stations, Radio FALINTIL, rebroadcasts programmes from the Voice of America. Community radios operated by community members or NGOs can be found in all the districts. TV Timor-Leste is the only local television station and is operated by the government. Cable television services are provided by foreign companies such as Indonesia's IndoVision.

## Human resource development

There are about a dozen ICT training centres located in Dili. Three institutions of higher learning are conducting ICT courses. They are the National University of East Timor offering a degree in informatics, the University of Dom Martinho Lopes offering a degree in IT, and the Dili Institute of Technology offering a degree in computer science, each of them with an enrolment of 40–50 students in these courses.

The IT Training Centre, a joint initiative of the Asia-Pacific Development Information Programme and Yayasan Salam Malaysia established in mid-2001, has conducted ICT training for some 1,300 trainees. The trainees include government personnel, undergraduates and youths. Apart from these public training programmes, Timor Telecom conducts its own in-house courses for its employees, which lead to Cisco certification.

MIMOS Bhd of Malaysia teamed up with the Global Knowledge Partnership, the Swiss Development Corporation, AOC & Associates, the National Youth Council of Timor-Leste and the Ministry of Education, Culture, Youth and Sport of Timor-Leste to conduct the Dili International Youth Forum in November 2003 as part of the Timor-Leste ICT Capacity Building Project. The forum's purpose was to help develop the ICT Youth Action Plan for the next five years. Six projects were discussed for implementation.

## Policy and regulatory environment

The current development in telecommunications access and services in Timor-Leste compares favourably with that existing under the Indonesian regime. The key concern now is to improve service quality and practical access while at

the same time reducing the relatively high cost of telephone calls and Internet access. The responsibility for regulating the telecommunications sector rests with the Ministry of Communication, Transportation and Public Works. However, no statutory legislation is currently in force to guide the regulatory functions of the ministry. Instead, the national telecommunications policy, which was prepared by the UN Transitional Administration in East Timor and adopted by the East Timor Transitional Administration as Regulation No. 2001/15 in late 2001, has served as the only policy framework. A much broader ICT policy remains to be developed.

Regulation No. 2001/15 provides for the privatisation and liberalisation of the telecommunications sector and for network development, including the use of the Internet and VoIP. It recognises that as Timor-Leste does not have its own resources to construct a new telecommunications system it is dependent on external financing to achieve the objective. A build, operate and transfer (BOT) project was thus designed to accomplish this task. Article 4.2 of the document states that the establishment of private networks will not be restricted but will be subject to government approval according to a set of criteria to be determined by the telecommunications regulatory authority. It also states that other contractors, independent of the BOT winner, may also provide these networks. No foreign investment limit is specifically set.

After the formal transfer of power from the UN Transitional Administration to the elected government in May 2002, the new government proceeded quickly with the BOT project and appointed Portuguese Telecom, the successful bidder, with a 15-year period of exclusivity. At the end of this period, the assets of the project will be transferred to the government, after which decisions will be made on whether to formalise a partial or complete privatisation of the assets. With this provision, all telecommunications services are to be provided exclusively by Timor Telecom as the universal service provider. According to the government, exclusive licensing is necessary to allow the BOT operator to recoup its investments with a margin of profit. Moreover, if competition were introduced from the beginning, operators would have concentrated on urban areas, leaving the less profitable rural areas unserved. There is a general view within the government that introducing competition at this stage in the development of the country will be counter-productive and will undermine the development of the sector.

In July 2003, the government passed two new laws. Law 11/2003 governs telecommunications, while Law 12/2003 provides for the establishment of the Communication Regulatory Authority, the official certification authority. These laws regulate facilities and service providers and not Internet content.

Timor Telecom continues to use the “.tp” domain, which was set up in the 1990s by the resistance movement. The hostmaster team at Connect-Ireland is responsible for the registration of “.tp” domain names.

ISPs are required to apply for a licence before starting operations. Three ISP licences have been issued, one to Telstra of Australia and two to local operators. However, all ISPs are required to purchase their bandwidth from Timor Telecom, thereby reducing their ability to price their services competitively. Timor Telecom is effectively providing most of the services.

## Trends

Awareness of ICT in Timor-Leste will continue to increase, and the new technologies will gradually become tools of daily life. Timorese are fast realising that ICT is needed for the country's development and that it serves as the bridge to a globalised and digitised world. However, the difficult economic conditions, brought about by recent events in the country, put computers out of reach of Timorese. At the same time, the lack of basic infrastructure and affordable access is hampering Internet use.

The government, private sector and civil society are working together to create low-cost solutions for developing the ICT sector. The development of local content in the local language is also being planned. Policy makers have to look into how the development of ICT infrastructure and services will be funded. The private sector, for now, seems more able to deliver reliable ICT services. Political will is needed in bridging the vast digital divide that separates Timor-Leste from the world community. The people should be consulted on the content, infrastructure and services that they need.