



AIR TRANSPORT

ANNUAL REPORT 2016

Transport & ICT Global Practice



WORLD BANK GROUP





END EXTREME POVERTY WITHIN A GENERATION AND BOOST SHARED PROSPERITY

THE WORLD BANK MISSION



TABLE OF CONTENTS

FOREWORD	1
ABBREVIATIONS	3
ACKNOWLEDGEMENTS	6
OVERVIEW	7
PORTFOLIO	9
IBRD & IDA PROJECTS	11
IFC PROJECTS	43
MIGA PROJECTS	56
KNOWLEDGE	57
INTERNAL SERVICES	59
EXTERNAL RELATIONS	61
OUTLOOK	65

INVESTING IN SAFE, AFFORDABLE, AND SUSTAINABLE AIR TRANSPORT

In 1952, 65 years ago, the International Bank for Reconstruction and Development granted a US\$ 7 million loan to KLM Dutch Airlines. This loan, which supported a \$33.5 million re-equipment program involving the acquisition of twenty-three aircraft for KLM, was the 59th loan of the World Bank since its creation in 1944. However, loan 59 also marked the first financing in the air transport sector of a client country, the Netherlands, recognizing the importance of the sector for the economic development of post-war Europe.

The 12th edition of the World Bank Group (WBG) Air Transport Annual Report, summarizes the current portfolio of the air transport practice at the WBG, and highlights some of the projects in more detail. Over the past 65 years, the WBG has engaged in various projects that aimed at supporting the development of sustainable air transport networks. The types of projects range from aircraft acquisitions, airport and air traffic control infrastructure investments, capacity building in regulatory oversight, advise on aviation policy matters and environmental issues, as well as fostering private sector participation in air transportation in emerging markets.

Passenger growth is solid and air travelers are forecasted to double by 2035

The global Air Transport Industry continues on its successful path, marked by strong growth especially in certain emerging markets, and healthy consolidation in more mature regions. While air cargo still remains somewhat below expectations, passenger growth is solid and air travelers are forecasted to double by 2035. Globally, the air transport industry now supports 63 million jobs and US\$2.7 trillion in global GDP.

The improved performance of the sector has made investments in air transportation more attractive. For a second year, airlines' return on capital exceeded their cost of capital on a global scale, and many mid-sized airports in emerging markets are able to attract private capital to finance needed infrastructure expansion. Nevertheless, not all regions experience strong financial performance. For example, while the Asia-Pacific carriers were able to post a profit of US\$ 900 million in 2016, African airlines lost US\$ 800 million, and many Africa airports still experience insufficient traffic for being able to finance needed investments.

The WBG continues to recognize the potential of air transportation to contribute to economic development and shared prosperity. However, given the heterogeneous development of the sector in emerging markets, it is important to focus support and investments in regions and markets where the private sector is challenged by low or negative returns. This explains the declining number for public sector airport projects, as well as the WBG's enhanced focus on Public-Private Partnerships in airport infrastructure projects.

Globally, the air transport industry now supports 63 million jobs and \$2.7 trillion in global GDP

This report summarizes the WBG air transport development activities, which include an overall portfolio of US\$1.24 billion, and several analytical and technical research products. With this activity we remain actively engaged around the world on air transport development, by addressing policy and regulation, safety, infrastructure rehabilitation, institutional strengthening, and capacity building in client countries. Finally, environmental challenges of aviation, and how to mitigate them in emerging markets, continue to be a top priority for the WBG, which we address in cooperation with strategic partners.

We look forward to continue addressing the challenges and opportunities of the sector in 2017 to help achieving safe, affordable, and sustainable air transportation for all.



Dr. Charles E. Schlumberger
Lead Air Transport Specialist
The World Bank Group

ABBREVIATIONS

ACI	Airports Council International
ADS-B/C	Automatic Dependent Surveillance – Broadcast/Contract
AGL	Aeronautical Ground Lights
ATC	Air Traffic Control
ATM	Air Traffic Management
BOT	Build-Operate-Transfer
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
BTO	Build-Transfer-Operate
CAA	Civil Aviation Authority
CES	Charles E. Schlumberger, Lead Air Transport Specialist (WBG)
DME	Distance Measuring Equipment
GNSS	Global Navigation Satellite System
EASA	European Aviation Safety Agency
EC	European Commission
ESW	Economic Sector Work
FAA	Federal Aviation Administration (United States)
FY	Fiscal Year
IATA	International Air Transport Association
IASA	International Aviation Safety Assessment (FAA)
IBRD	International Bank for Reconstruction and Development (WBG)
ICAO	International Civil Aviation Organization (UN Agency)
IDA	International Development Association (WBG)
IFC	International Finance Corporation (WBG)
ILS	Instrument Landing System
IOSA	IATA Operational Safety Audit
LCC	Low-Cost Carrier
MIGA	Multilateral Investment Guarantee Agency (WBG)
PPPA	Public Private Partnership Agreement
PPP	Public-Private Partnership
SARPS	Standards and Recommended Practices
TA	Technical Assistance
DOT	Department of Transportation
USOAP	Universal Safety and Security Oversight Audits Program (ICAO)
VOR	VHF Omni-Directional Radio Range
VSAT	Very Small Aperture Terminal
WB	World Bank
WBG	World Bank Group
WRSS	World Routes Strategy Summit





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The Mission

The World Bank Group (WBG) is a vital source of financial and technical assistance to developing countries around the world through the provision of low-interest loans, grants, credits, guarantees and advisory services. The World Bank Group aims to achieve two major goals by 2030:

- ◆ End extreme poverty by decreasing the percentage of people living on less than \$1.25 a day to no more than 3 percent.
- ◆ Promote shared prosperity by boosting the income of the bottom 40 percent of the population in every country.

The World Bank Group aims to tackle these challenges through financing, cutting-edge solutions, cross-sectorial knowledge, and partnerships with relevant public and private sector actors, as well as civil society. The organization's investments span across a number of sectors including education, health, public administration, private sector development, agriculture, and transport and ICT.

The Institutions and New Structure

The International Development Association (IDA) is the part of the World Bank that helps the world's poorest countries by providing interest-free loans, or credits, and grants. The World Bank's original lending arm is the International Bank for Reconstruction and Development (IBRD), which lends to governments of middle-income and creditworthy low-income countries. The International Finance Corporation (IFC) provides loans, equity, and advisory services to stimulate private sector investment in developing countries. The Multilateral Investment Guarantee Agency (MIGA) provides political risk insurance or guarantees to facilitate foreign direct investment in developing countries. The International Centre for Settlement of Investment Disputes (ICSID) is also a part of the WBG, but will not be covered in this report.

The WBG has recently undergone major institutional change, and Transport and ICT is now a Global Practice. The Bank's new nimble structure with Global Practices and Cross-Cutting Solution Areas is designed to strengthen collaboration and improve knowledge sharing across the institution. These changes are intended to improve operational efficiency, financial sustainability, and ultimately work toward meeting the twin goals of ending extreme poverty and boosting shared prosperity.

Enhancing Mobility and Connectivity

Transport is a critical driver of economic and social development. Transport infrastructure connects people to jobs, education, and health services; it enables the supply of goods and services around the world; and allows people to interact and generate the knowledge and solutions that foster long-term growth. The World Bank's transport investments have facilitated more efficient trade and enhanced human development through greater mobility.

As a multi-sectorial institution, the World Bank Group is uniquely positioned to support large-scale transformational projects and deliver innovative cross-cutting solutions for greater connectivity. The World Bank's strategy in the transport sector, adopted in 2008, envisioned mobility solutions for developing countries that would be safer, cleaner and more affordable. These three principles guide the Bank's infrastructure investments and policy work. The WBG is the largest provider of development finance for transport globally, with an active portfolio of around US\$48 billion.

Air transport plays an important role in fostering development, particularly in facilitating economic integration, generating trade, promoting tourism, and creating employment opportunities. It facilitates integration into the global economy and provides vital connectivity on a national, regional, and-

international scale. However, in many countries air transport equipment and infrastructure, regulatory frameworks, and safety and security oversight systems are inefficient or inadequate.

In view of these challenges and to assist clients in establishing a safe, secure, cost efficient, accessible and reliable air transport network, the Bank is mandated to undertake the following major activities:

- ◆ Operational work through projects and technical assistance.
- ◆ Economic sector work, research, and knowledge dissemination on air transport related issues.
- ◆ External relations and collaboration with partner organizations.
- ◆ Internal services (such as the airline advisory service for WBG staff travel).

Portfolio and Project Highlights

In Fiscal Year 2016 (FY16), WBG's Air Transport Portfolio amounted to US\$1.24 billion, a decrease of 9% from Fiscal Year 2015 (FY15). The Air Transport segment makes up around 2.6% of the WBG's US\$48 billion Transport portfolio. The WBG's FY16 Transport portfolio consists approximately 18.6% of the WBG's active portfolio of US\$259 billion (excluding MIGA).

The Air Transport portfolio includes some 72 projects or project components through the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA), as well as the International Finance Corporation (IFC)'s portfolio of lending and non-lending products in the aviation sector.

Project highlights in 2016 include the approval of four Additional Finance for the aviation investment projects in Tonga (US\$7.3 million), Tuvalu (US\$2.9 million), Samoa (US\$16.6 million) and Kiribati (US\$7.1 million) as part of the Pacific Aviation Investment Program (PAIP). PAIP is currently being implemented in Vanuatu, Kiribati, Tonga, Tuvalu, and Samoa.

Current IBRD projects in air transport include the Cairo Airport Development Project, which is being funded through a US\$280 million loan, the Shan-grao Sanquingshan Airport, which is being funded through a US\$50 million loan, and the US\$52 million DRC Goma Airport Safety Improvement Project. Additionally, the US\$285 million Aviation Modernization Project in Kenya is currently in the pipeline.

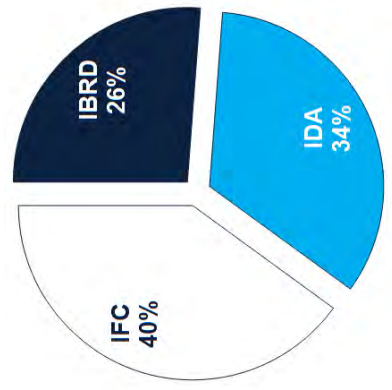
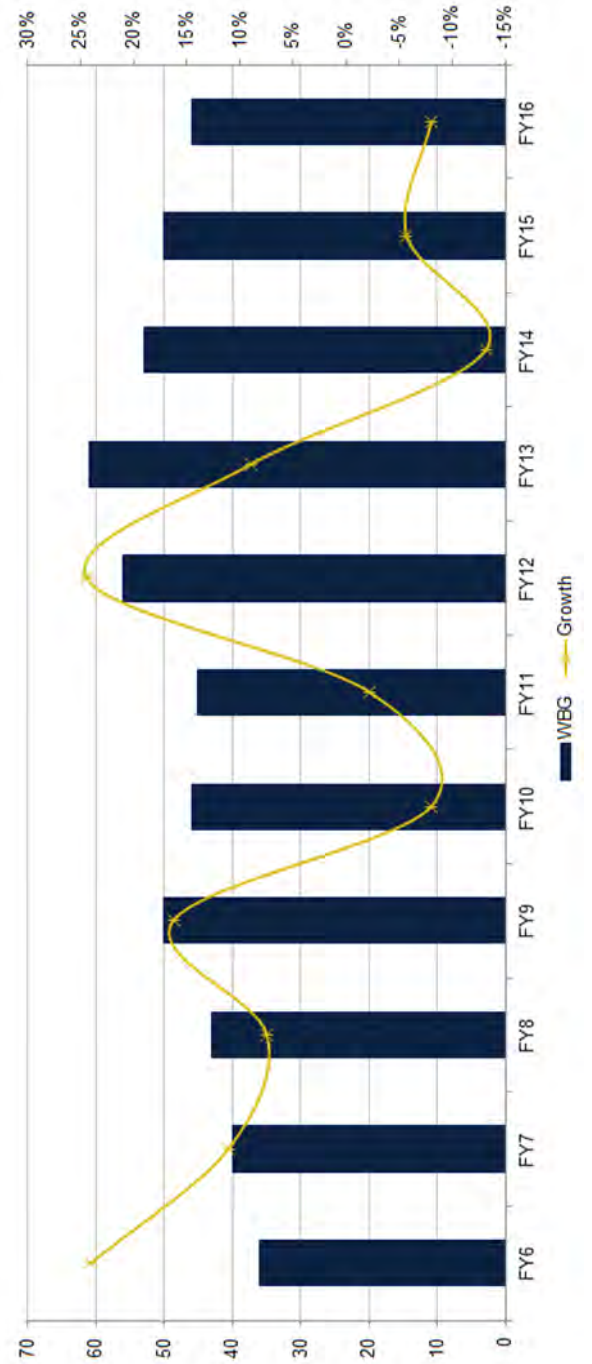
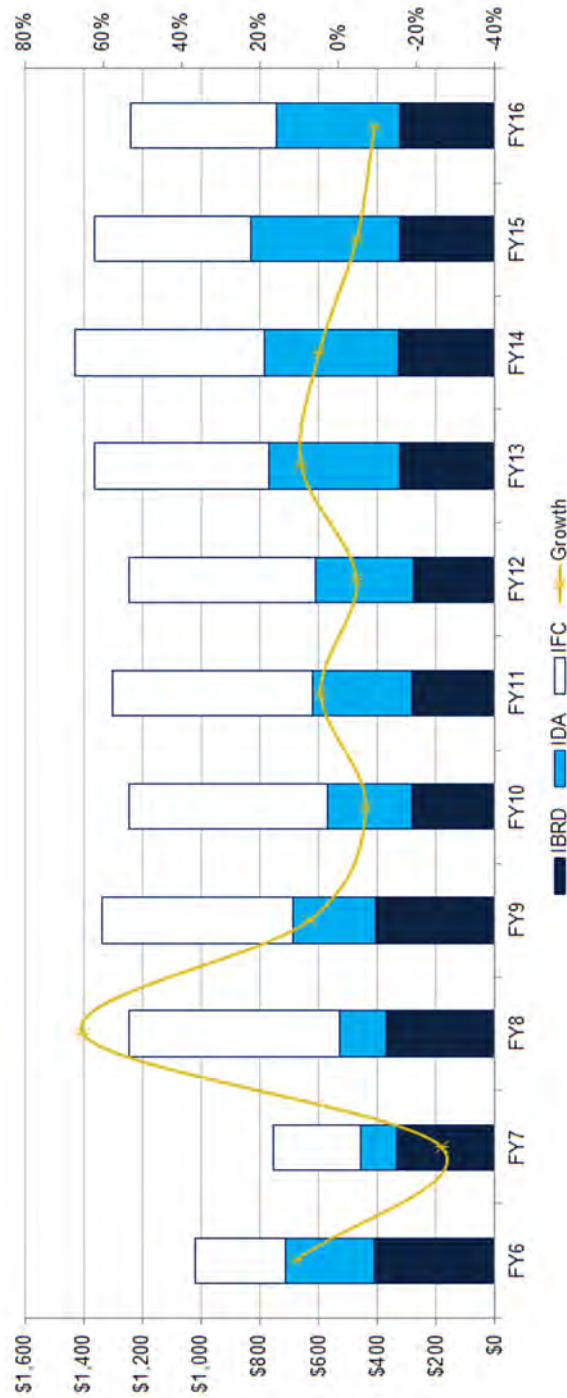
Major current commitments by the International Finance Corporation (IFC) in FY16 include ASECNA in Africa, Queen Alia II in Jordan, the Zagreb Airport in Croatia, the Enfidha airport construction in Tunisia and the Pulkovo Airport in the Russian Federation. IFC is active through Advisory Services in Jamaica, Saudi Arabia and Santa Lucia. MIGA has been involved in the air transport sector in the past through the issuance of guarantees for two airport projects in Ecuador and Peru.

Research and External Relations

World Bank staff members continue to represent the organization externally at various air transport conferences and events, notably the ACI-WBG Aviation Symposium in London, UK. Research and knowledge dissemination also continue to constitute critical functions of the WBG's Air Transport Community of Practice (ATCOP). Looking forward, the practice maintains its strong commitment to addressing the challenges of its client countries.

PORTFOLIO

\$1.24B
FY16 WBG
AIR TRANSPORT
PORTFOLIO

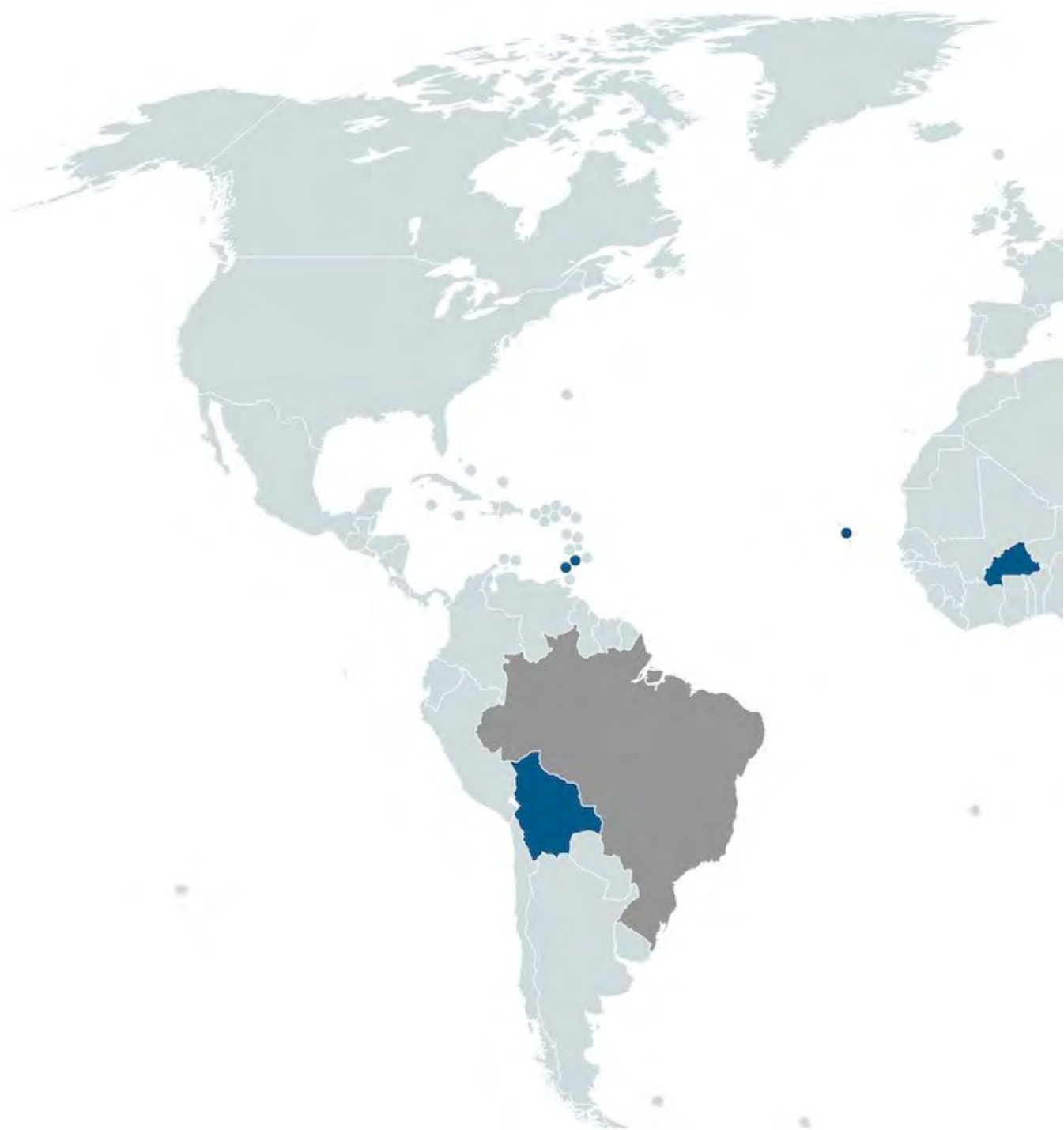


The WBG is a vital source of financial and technical assistance to developing countries through low-interest loans, credits, and grants. In Fiscal Year 2016, the World Bank's Air Transport Portfolio is around US\$1.24 billion. This included a total of 72 lending and non-lending projects or project components through the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA), as well as the International Finance Corporation (IFC)'s portfolio of lending and investment advisories in the aviation sector.

Active Portfolio	IBRD			IDA			IFC			TOTAL		
	FY16	FY15	Change	FY16	FY15	Change	FY16	FY15	Change	FY16	FY15	Change
<i>(in millions USD)</i>												
WB Group Total Active Portfolio	108,282	99,574	8.75%	99,068	92,334	7.29%	51,994	50,402	3.16%	259,344	242,310	7.03%
WB Group Active Portfolio-Transport	28,510	26,817	6.31%	16,520	16,078	2.75%	3,091	2,930	5.49%	48,121	45,826	5.01%
Transport % of Total Active Portfolio	26.33%	26.93%	-0.60%	16.68%	17.41%	-0.74%	5.95%	5.81%	0.13%	18.55%	18.91%	-0.36%
Air Transport Active Projects	325	325	0.00%	420	507	-17.14%	496	535	-7.20%	1,241	1,367	-9.17%
% of Total Active Portfolio	0.30%	0.33%	-0.03%	0.42%	0.55%	-0.12%	0.95%	1.06%	-0.11%	0.48%	0.56%	-0.09%
% of Total Transport Portfolio	1.14%	1.21%	-0.07%	2.54%	3.15%	-0.61%	16.06%	18.26%	-2.20%	2.58%	2.98%	-0.40%

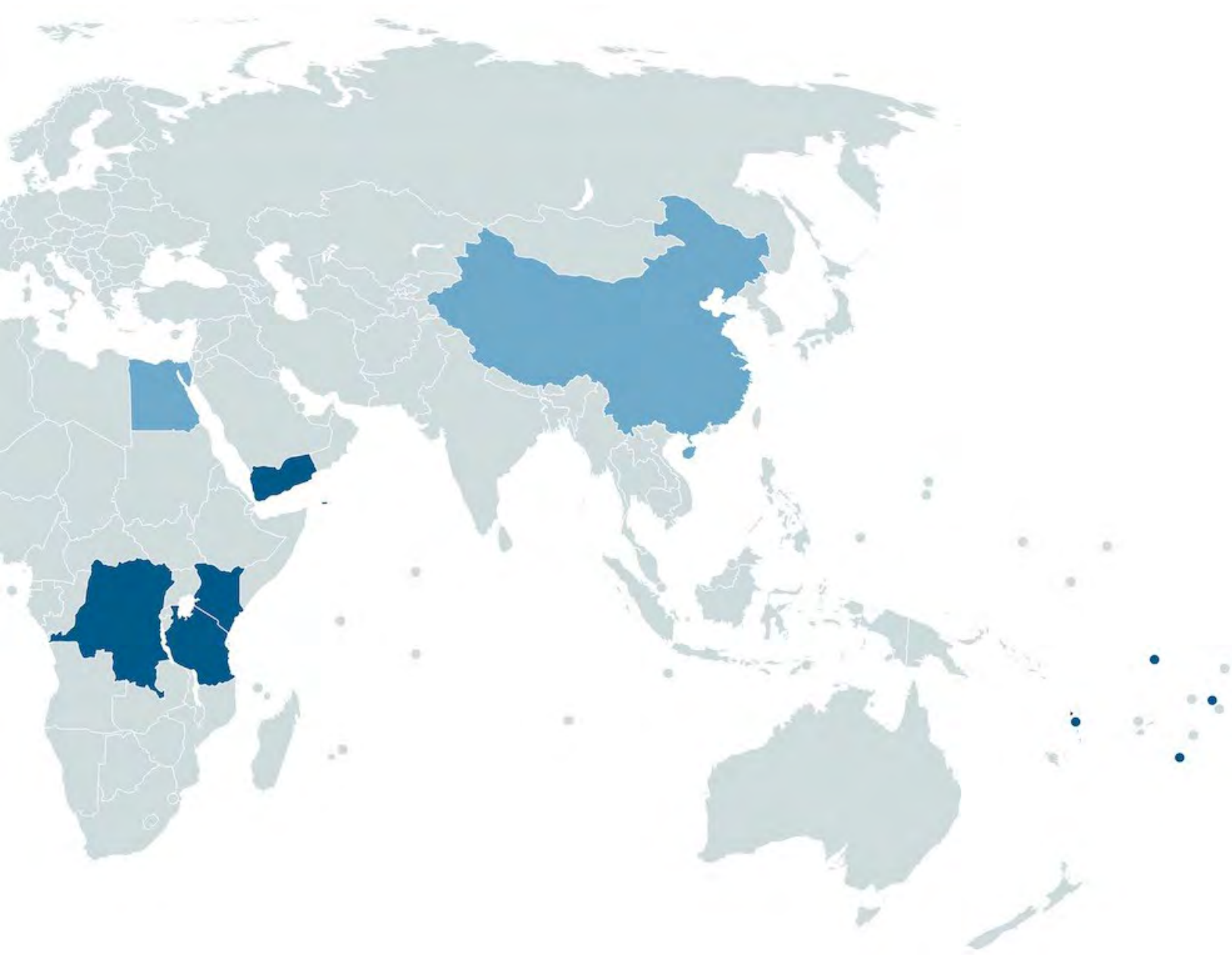
Note: Excluding the Multilateral Investment Guarantee Agency (MIGA)

Active Air Transport Projects in FY15: IBRD and IDA invest in a number of air transport projects worldwide focusing on regulatory reform, capacity building and infrastructure investments, as well as technical assistance and analytic/advisory services.



World Bank Commitment

- IBRD
- IDA
- Non Lending



IBRD AND IDA LENDING PROJECTS

Region	Country	Project Code	Project Name	Description of Aviation Component	WGB Commitment (Million US\$)		Type	Status as of End of FY2016
					Total	Aviation Component		
Africa	Burkina Faso	P120960	Burkina Faso Donsin Transport Infrastructure Project	Technical assistance for new Ouagadougou Airport	85.0	1.7	IDA Credit	Active
Africa	Cape Verde	P126516	Cape Verde -Transport Sector Reform Project	Institutional capacity building, technical assistance, and support of national airline	19.0	2.1	IDA Credit	Active
Africa	Democratic Republic of Congo	P153085	Goma Airport Safety Improvement Project	Improve the safety, security, and operations of Goma International Airport through infrastructure investments and capacity building.	52.0	45.2	IDA Grant	Active
Africa	Democratic Republic of Congo	P092537	Multi-Modal Transport	Improve transport connectivity and support economic integration in the region	435.0	43.5	IDA Grant	Active
Africa	Kenya	P124109	Transport Sector Support Project	Enhance aviation security and safety, and improve institutional capacity	503.5	45.3	IDA Credit	Active
Africa	Kenya	P082615	Northern Corridor Transport Improvement Project	Enhance aviation security and safety, and improve institutional capacity	460.0	69.0	IDA Credit	Closed

Region	Country	Project Code	Project Name	Description of Aviation Component	WGB Commitment (Million US\$)		Type	Status as of End of FY2016
					Total	Aviation Component		
Africa	Tanzania	P103633	Second Central Transport Corridor	Improve Zanzibar Airport facilities and build capacity	290.0	26.1	IDA Credit	Active
Africa	Tanzania	P055120	Transport Sector Support Project	Rehabilitation and extension of regional airports	329.0	69.1	IDA Credit	Active
East Asia and Pacific	China	P123729	Shangrao Sanqingshan Airport Project	Improve airline connectivity and environmental sustainability of development and operation of the Shangrao Sanqingshan Airport	50.0	48.0	IBRD Loan	Active
East Asia and Pacific	Kiribati	P128938	Pacific Aviation Investment - Kiribati	Infrastructure investment, sector reform and training, and strengthening airport operations and management capacity	30.0	25.5	IDA Grant	Active
East Asia and Pacific	Kiribati	P153381	Kiribati Aviation Investment Project AF	Infrastructure investment, sector reform and training, and strengthening airport operations and management capacity	7.1	5.5	IDA Grant	Active
East Asia and Pacific	Pacific Islands	P145057	Pacific Aviation Safety Office Reform	Strengthen the Pacific Aviation Safety Office's technical and coordination capacity	2.2	0.3	IDA Grant	Active

IBRD AND IDA LENDING PROJECTS (continued)

Region	Country	Project Code	Project Name	Description of Aviation Component	WGB Commitment (Million US\$)		Type	Status as of End of FY2016
					Total	Aviation Component		
East Asia and Pacific	Samoa	P143408	Samoa Aviation Investment Project	Improve operational safety and oversight	41.6	38.3	IDA Grant	Active
East Asia and Pacific	Samoa	P157241	Samoa Aviation Investment Project AF	Improve operational safety and oversight	16.62	15.3	IDA Grant	Active
East Asia and Pacific	Tonga	P128939	Pacific Aviation Investment - Tonga	Infrastructure investment, sector reform and training, and strengthening airport operations and management capacity	34.5	26.5	IDA Grant	Active
East Asia and Pacific	Tonga	P156018	Tonga Aviation Investment Project AF	Infrastructure investment, sector reform and training, and strengthening airport operations and management capacity	7.25	5.7	IDA Grant	Active
East Asia and Pacific	Tonga	P096931	Tonga Transport Sector Consolidation Project	Improve safety and security compliance; provide technical assistance to CAA	9.4	4.2	IDA Grant	Active
East Asia and Pacific	Tuvalu	P128940	Pacific Aviation Investment - Tuvalu	Infrastructure investment, sector reform and training, and strengthening airport operations and management capacity	20.8	18.1	IDA Grant	Active

Region	Country	Project Code	Project Name	Description of Aviation Component	WGB Commitment (Million US\$)		Type	Status as of End of FY2016
					Total	Aviation Component		
East Asia and Pacific	Tuvalu	P157779	Tuvalu Aviation Investment Project AF	Infrastructure investment, sector reform and training, and strengthening airport operations and management capacity	2.88	1.7	IDA Grant	Active
East Asia and Pacific	Vanuatu	P154149	Pacific Aviation Investment - Vanuatu	Improve operational safety and oversight of international air transport and associated infrastructure	59.5	54.7	IDA Credit	Active
Latin America and Caribbean	Bolivia	P122007	National Roads and Airport Infrastructure Project	Infrastructure development; improve safety, security and operational reliability of the Rurrenabaque Airport	109.5	5.5	IDA Credit	Active
Latin America and Caribbean	Grenada, St. Vincent, the Grenadines	P117871	Regional Disaster Vulnerability Reduction Project (APL1)	Improve emergency response capability	56.5	13.6	IDA Credit	Active
Middle East and North Africa	Egypt	P101201	Cairo Airport Development Project-TB2	Build capacity of Cairo International Airport; rehabilitation and expansion of Terminal Building 2; safety and security	280.0	277.2	IBRD Loan	Active
Middle East and North Africa	Yemen	P088435	Port Cities Development II Project	Improve efficiency, and rehabilitation and extension of Mukalla Airport	22.1	3.76	IDA Grant	Active

IBRD AND IDA PIPELINE PROJECTS

Region	Country	Project Code	Project Name	Description of Aviation Component	WGB Commitment (Million US\$)		Type	Status as of End of FY2016
					Total	Aviation Component		
Africa	Kenya	P156971	Airport Modernization Project	The proposed project involves amongst others modernization of Kenyan major airports including enhancing security to meet international standards	285.0	228.0	Blend	Pipeline
Central Asia	Central Asia	P159220	Central Asia Regional Links—Phase 3	Increase regional connectivity	60.0	18.0	IDA	Pipeline
Central Asia	Tajikistan	P126273	Tajikistan DPO-2	Help the Government to maintain high growth within a sustainable macroeconomic framework	30.0	7.2	IDA	Pipeline
Latin America and Caribbean	Paraguay	P147278	Paraguay Transport Connectivity	Reduce transport connectivity cost and improve safety	100.0	10.0	IBRD	Pipeline

IBRD AND IDA NON-LENDING PROJECTS

Region	Country	Project Code	Project Name	Description of Aviation Component	Aviation Component	Type	Status as of End of FY2016
Africa	Regional	P149328	Air Transport in West and Central Africa	Policy reform roadmap to develop air transport as a means to regional economic integration	100%	ESW	Closed
Africa	Regional	P154343	Modernizing Hyrdomet services in Africa	Modernization of Hyrdo-met services in Africa	20%	TA	Active

IBRD AND IDA NON-LENDING PROJECTS (continued)

Region	Country	Project ID Code	Project Full Name	Description of Aviation Component	Aviation Component	Type	Status as of End of FY2016
Africa	Zimbabwe	P157125	Transport Sector Support to ZIMREF	Assist in the reform of Civil Aviation Zimbabwe (CAZ) through support to capital budget TA	20%	TA	Active
East Asia and Pacific	Pacific Islands	P155515	Host to the World - Pacific Possible	Support tourism development in selected South Pacific economies as a conduit for economic growth, job creation and trade by fostering air travel connectivity between the Pacific Islands and China	15%	ESW	Closed
Europe and Central Asia	Tajikistan	P152420	Tajikistan Multimodal Transport	Regional strategy and roadmap for improved connectivity in the region	20%	ESW	Closed
Latin America and Caribbean	Brazil	P157817	PPP for transport infrastructure service	Support to project preparation and Model project preparation	10%	TA	Active
Latin America and Caribbean	Latin America	P151023	LCR Connectivity and Equity: Regional Study	The objective is to investigate the effects of transport connectivity on a LCR subregion, how connectivity is characterized spatially, and how various levels of transport connectivity (access and costs) can ultimately create more equitable	20%	ESW	Closed
Multi-Regional	Multi-Regional	P156927	Knowledge Management and Partnerships	Strengthen global hydromet systems and improve weather, climate and hydrological service delivery in developing countries	10%	TA	Active

IBRD AND IDA NON-LENDING PROJECTS (continued)

Region	Country	Project ID Code	Project Full Name	Description of Aviation Component	Aviation Component	Type	Status as of End of FY2016
Multi-Regional	Multi-Regional	P156930	Global Hyrdomet Systems	Strengthen National Meteorological and Hydrological Services	10%	TA	Active
South Asia	Sri Lanka	P146193	Development of Domestic Airports	Introducing private sector participation in the development of domestic airports in Sri Lanka	100%	TA	Closed

AFRICA

Project Highlights



CABO VERDE

Cabo Verde Transport Sector Reform Project (P126516)

The objective of the project, in the IDA amount of US\$19 million, is to improve efficiency and management of the national road assets and to lay the groundwork for transport sector State Owned Enterprise reform. Among the concerned transport sector State Owned Enterprises is TACV, the national airline company, which is structurally in deficit. Making the right decision on TACV requires strong political will and leadership given the sensitivity of the company in Cabo Verde. Following a request from the new Government, the World Bank has conducted a mission to analyze the situation of TACV in order to recommend the appropriate way forward. The mission has developed several restructuring options concerning domestic traffic and international traffic. Follow-up activities are underway to allow the Government to make an informed decision on the future of TACV.

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DEMOCRATIC REPUBLIC OF CONGO

Goma Airport Safety Improvement Project (P153085)

In FY15, the World Bank's Board approved a US\$52 million IDA grant to help improve the safety, security, and operations of Goma International Airport, the main international gateway of Eastern Democratic Republic of Congo (DRC) and repair the infrastructure. The airport is a vital link to connecting the area to the rest of the country and supporting ongoing peace consolidation efforts. In addition to decades of conflict, the most significant damage to the airport's sole runway and taxiway resulted from the 2002 Mount Nyiragongo volcano eruption.

The lava flow from the volcano buried more than one third of the 3,000-meter runway and isolated the terminal and apron, constraining humanitarian

aid flows, UN operations, and passenger and cargo transport. There have been seven recorded air crashes since 2002 at the airport with dozens of fatalities, many of them attributed to the condition of the airport.

The project will restore the airport's runway original length, rehabilitate the apron, existing passenger and cargo terminals, and electrical system, as well as supply a new low-cost control tower and navigational equipment to upgrade air navigation. The project will also include the construction of the airport's security fence and support airport rescue and firefighting services.

The project will support the valorization of the large quantity of lava rock removed from the airport through labor-intensive activities targeted to communities living close to the airport. The project will also complement a Japan-GFDRR grant supporting the monitoring of volcano risks and strengthening preparedness of the airport and surrounding communities. The significance of the project is evident – DRC's landmass is almost as large as the whole of Western Europe, therefore transport remains key to increasing agriculture, improving trade, supporting mining growth, overcoming the economic and social barriers that isolate communities, and providing security throughout the country.

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DEMOCRATIC REPUBLIC OF CONGO

Multi-Modal Transport Project (P092537)

The Bank approved a US\$255 million IDA grant for the Multi-Modal Transport Project in the Democratic Republic of Congo (DRC) in 2010 as well as a US\$180 million additional financing IDA grant in 2013. The project's main objectives are to (i) improve transport connectivity in the DRC, (ii) to restore Société Nationale des Chemins de Fer du Congo (National Railway Company of DRC,

SNCC) financial and operational viability, and (iii) to strengthen transport state-owned enterprises (SOEs) operational performance.

The project's four main components include: (1) SNCC recovery plan, (2) operational performance strengthening and improved governance of the sector, (3) international trade procedures simplification, and (4) project management. Most of the project financing (85%) go to the railway component. The sub-component dedicated to aviation will help DRC move towards compliance with international safety and security standards through the supply and installation of critical equipment for air traffic control and airspace control. The sub-component is financing (US\$ 15 million): (i) the procurement and installation of ADS-B surveillance equipment by the National Airways Management Agency/Regie des Voies Aeriennes in 5 airports (RVA), the organization in charge of airports, (ii) a new category II ILS/VOR/DME system for the capital's international airport Kinshasa/N'Djili (FIH), (iii) two studies on the development of airports in the country (one on freight development at FIH, and one on secondary airports), (iv) training for RVA personnel in air traffic control, airport rescue and firefighting services, and (v) the strengthening of the National Civil Aviation Agency, which is in charge of overall regulation of the sector. (vi) a recertification campaign for the five largest airlines.

Key activities related to aviation have already been implemented, albeit with some delays in procurement and reforms. The study on the cargo zone in Djili airport and the study on secondary airports are complete. The installation of the navigation assistance systems (CNS/ATM and 5 ADS-B) is ongoing and the equipment is expected to be operational by January 2017. Landing assistance systems (ILS/DME) are installed but not operational at N'Djili airport while the DVOR/DME initially procured for Kinshasa airport will eventually be installed at Kalemie airport.

There still remain areas of improvement for the reform of governance in the aviation sector. Five of the largest airlines in DRC seeking recertification initially failed to provide the requested documenta-

tion. The government adopted a sector wide strategy in 2014 and a technical assistance from ICAO has started in 2016.

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KENYA

Transport Sector Support Project (P124109) and Northern Corridor Transport Improvement Project (P082615)

A US\$300 million IDA commitment was approved in 2011 for the Transport Sector Support Project in Kenya. The project's objective is to increase the efficiency of road transport, raise aviation safety and security at Kenya's airports to international standards, and improve the institutional arrangements and capacity of the transport sector.

Following the fire at Jomo Kenyatta International Airport (JKIA) in August 2013 that destroyed the only international arrival building, the Bank provided an additional financing component of US\$60 million to help finance activities to restore the capacity of the international passenger terminal destroyed in a fire at JKIA, strengthen KAA in disaster preparedness and responsiveness at Kenyan airports, and fill any unanticipated financing gaps. Most of the emergency activities at JKIA following the fire incident have either been completed or are nearing completion.

The aviation component of the project entails providing support to the Kenya Civil Aviation Authority (KCAA) in regulatory capacity building and through specific investments in navigation aids and training equipment. In addition, support to Kenya Airports Authority (KAA) will include provision of a new baggage-handling system at Jomo Kenyatta International Airport (JKIA), and capacity building and training of manpower in safety, security, and airports management.

As planned under the project, the Government of Kenya agreed to the restructuring of the KCAA by separating the oversight function from its service

provision responsibilities to improve effectiveness of oversight services and contribute to enhanced efficiency among service providers. Both KAA and KCAA have been given financial autonomy and now retain revenues generated. As part of this process, KCAA has increased the pay packages for key flight safety operations staff, which is critical for carrying out its oversight function. Furthermore, KAA has taken over the responsibility of screening passengers and baggage from the Kenyan police. A consultant has been selected and is assisting in the restructuring process.

KAA has to conclude the procurement of several outstanding contracts including reconstructing the runway at MIA Mombasa, design for upgrading power supply at MIA, design for augmenting water supply at JKIA, MIA and Kisumu airport, and supply of apron buses at JKIA.

Implementation on the Northern Corridor Transport Improvement Project is on track as well, despite some delays. The expansion of apron at JKIA and taxiways has increased the capacity of parking space for aircrafts by 50 percent, and expanded the capacity of the runway. The selection of a consultant to update the detailed designs on the remodeling, renovation and expansion of Units 1, 2, and 3 at JKIA is nearing completion but with modified scope of the assignment that has to take into account the impact of the fire incident. The construction of Terminal 4 (renamed T 1A) is completed and the terminal is in use.

Expansion and improvements at Kisumu airport is now complete, and has contributed to the stimulation of economic activities in Western Kenya. Traffic at the airport has grown from 40,000 passengers at the time of appraisal to 400,000 in the year 2013.

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TANZANIA

Transport Sector Support Project (P055120)

In May 2010, the Bank approved a credit of US\$270 million for the Transport Sector Support Project (TSSP) in Tanzania. In support of the Transport Sector Investment Program (TSIP), the project's goal is the rehabilitation and preparation of designs for part of the paved national road network, and the rehabilitation and/or upgrading of regional airports.

The project received additional funding (AF) of US\$59 million on 30 June 2011. This prompted the revision of the project development objectives and expanded the scope of the aviation component. The component for airport upgrades and rehabilitation includes (i) the paving and rehabilitation of the runway at Kigoma airport (ii) the rehabilitation of the main runway at Tabora airport, as well as (iii) the extension, rehabilitation and paving of the runway and the replacement of the apron, terminal and car parking at Bukoba airport, which were signed in FY12.

The works at Kigoma and Tabora Airports has been completed and final acceptance was done in June 2014. The Bukoba airport runway, and apron were also completed and final acceptance was done in December 2014. The construction of Bukoba airport terminal building was completed and provisionally accepted in September 2015. The extension, and rehabilitation and widening works of the main taxiway (taxiway C), and the construction of the new apron, taxi way D, and a new link taxiway in the Zanzibar airport are completed and final acceptance is expected within January 2016. The feasibility study and detailed engineering design of eleven regional airports as well as the preparation of the Civil Aviation Master Plan have also been completed under the project.

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TANZANIA

Second Central Transport Corridor Project (P103633)

Approved for a credit of US\$190 million on 27 May 2008, and additional financing of US\$100 million on 15 January 2013, the Second Central Transport Corridor Project (CTCP2) in Tanzania aims to support the country's economic growth by providing enhanced transport facilities that are reliable and cost effective, in line with the National Transport Policy and Strategy. This includes the establishment of the Bus Rapid Transit (BRT) system in Dar es Salaam and the rehabilitation and extension of Zanzibar airport runway.

The Zanzibar airport component (US\$39.3 million) was implemented successfully between April 2009 and July 2010 and was completed officially on 3 August 2010. The airport's runway was rehabilitated and extended by 560 meters, from 2,462 meters to 3,022 meters long. Other works included runway marking, the construction of a perimeter access road, repair and provision of new aeronautical ground lights (AGL), and provision of a new filter drainage system on each side of the runway for the full length.

The project also financed the detailed design for the rehabilitation and extension of Zanzibar airport taxiways and apron and technical assistance to the Zanzibar Ministry of Infrastructure and Communication. The apron and taxiway rehabilitation works were implemented under the additional financing credit of IDA's Transport Sector Support project (TSSP), with an allocation of US\$57.23 million for works and supervision. The project improved safety and customer satisfaction and has enabled an increase in the number of commercial regular flights to Zanzibar.

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EAST ASIA & PACIFIC

Project Highlights





CHINA

Shangrao Sanqingshan Airport Project (P123729)

A US\$50 million IBRD commitment for the Shangrao Sanqingshan Airport Project was approved in May 2013. The overall objective of the project is to improve airline connectivity in the northeastern Jiangxi province, as well as demonstrate the environmental sustainability of the development and operation of the Shangrao Sanqingshan Airport.

Component 1: The first component of the project covers the airport infrastructure development and includes the construction and installation of the following: (a) airfield, runway, taxiway, etc.; (b) terminal building; (c) air traffic control; (d) freight facility; (e) supporting infrastructure facility, including fuel storage farm, water supply, water supply, power supply, fire stations, heating, storm/water management, parking, fence, etc.; (f) environmental management plan; (g) land acquisition and rehabilitation; (h) auxiliary facility; (i) service vehicles; and (j) storm water reuse system and ground aircraft auxiliary power unit.

The project is well on track to achieve its PDO. The physical components of the project progress well with 82% of the WB loan disbursed to date. The construction of the whole airport is approaching to the end before 2017, and the overall acceptance by the Civil Aviation Administration of China (CAAC) will follow. It is planned that the Shangrao airport will be on operation in May 2017, with several commercial airlines connecting to different domestic large cities.

Airport Acceptance: The regional bureau of CAAC had the acceptance inspection for the completed air-related infrastructure in Aug 2016. The Shangrao municipal construction had the acceptance inspection on the non-airfield buildings and municipal engineering works in Sep 2016. Certain recommendations were provided by the inspections, and the contractors are finalizing the civil works and installation. Between 6 and 11 October, the flight inspection center of CAAC conducted an inspection for navigation equipment and flight procedures. During the testing flight, the control tower equipment was fully tested, as well as the runway and lighting system. The testing result met the CAAC's standard and regulation. It is planned that

the trial flight will be conducted in Dec 2016, followed with the overall acceptance from the CAAC.

Airport Operational Arrangement: The operational arrangement for the airport has now been finalized, and the Jiangxi Airport Group, which is a sub-company of the Beijing Capital Airport Group, has signed an operating concession agreement with the Shangrao Municipality to operate the Shangrao airport. Jiangxi Airport Group established a sub-company in Dec 2015, Shangrao Airport Operation Company, to take over the operations of Shangrao airport once the overall acceptance is completed. Currently there are about 60 employees hired for Shangrao Airport Operation Company, and they are taking relevant trainings in the Shangrao airport. In addition to operating the airport, the Jiangxi Airport Group will assist Shangrao municipal government and the PMO to obtain the necessary approval and clearance from the civil aviation administration authorities before the airport is ready for operation.

Airline Service Agreement: The Shangrao Municipality paid much effort on the establishment of airlines connecting Shangrao with other major cities in China. The regional bureaus of the Civil Aviation Administration of China (CAAC) have been contacted, and the major airline companies have been communicated. To date, Shangrao Municipality has signed strategic cooperation agreements with the Sichuan Airline and the China United Airline, to create airlines connecting to Chengdu, Chongqing, Beijing and Foshan. The official service contracts will be signed after the final acceptance of the Shangrao Airport. At the same time, the PMO plans to contact the Shenzhen Airline in the near future to secure the connection to Shenzhen, because there are already many existing travel demands between Shangrao and Shenzhen due to the economic activities between two cities.

Component 2: The second project component finances consultancy services, studies and training, including advisory services to support the Project Management Office (PMO) and Shangrao Sanqingshan Airport Company Limited (SSAC) on project coordination and monitoring activities. Other activities will include consultancy services to de-

velop airport operation model for SSAC and compliance with regulations and international practices.

The Shangrao PMO plans to organize a workshop in Beijing/Shangrao on the topic of the experiences and lessons learnt during the design and construction of Green Airport in the summer of 2017 and another workshop in the summer of 2018 on the topic of the experiences and lessons learnt during the operation of Green Airport. The study on the Shangrao Green Airport experiences and lesson learnt summary: planning, design, construction and operation will be carried out soon. A new study on the Shangrao Airport operational manual review and optimization is newly added under the TA component as to assist the Jiangxi Airport Group to customize the standard operational manual to the Shangrao city circumstances, in terms of saving energy, improving efficiency, tourism development, local transport plan, and etc.

The project is well on track to achieve its PDO. With the construction largely completed, the focus of the project supervision has turned to operation arrangement, obtaining the green building certificate, and sharing of green airport design experience more widely.

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PACIFIC AVIATION INVESTMENT PROGRAM

In December 2011 IDA approved the Pacific Aviation Investment Program (PAIP), a series of projects designed to ensure that critical aviation infrastructure meets operational safety requirements, as well as to measures to strengthen regulatory compliance of international air transport of the participating Pacific Island Countries. Major elements of the US\$220 million program focus on the upgrading of and maintenance of critical airport infrastructure, including runway and apron rehabilitations, improvements to airport terminals, aeronautical equipment (navigation aids, runway lighting),

fire and rescue equipment, as well as technical assistance with strengthening of policy and regulatory capacity through master planning, reviewing air services agreements and developing aviation sector strategies.

Phase I of PAIP includes projects in Kiribati, Tonga and Tuvalu. Samoa entered the program in April 2014 as Phase 2, and IDA has since approved Phase 3 with Vanuatu in March 2015. Solomon Islands remains an eligible entrant to the IDA regional program. IDA also approved a Pacific Aviation Safety Office Reform Project in September 2013 in support of the regional entity's regulatory advisory mandates.

The Pacific Region Infrastructure Facility (PRIF), a multi-donor trust fund, has supported PAIP with resources to enable the continuation of on-going regional aviation safety and security oversight in participating States during a restructuring and transition of the Pacific Aviation Safety Office (PASO) through the IDA-financed PASO Reform Project. The funding allows grant recipients to purchase regulatory oversight advisory services in fulfilling safety inspection requirements for international aviation, while also supporting their obligations as a signatory to the Pacific Islands Civil Aviation Safety and Security Treaty.

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KIRIBATI

Kiribati Aviation Investment Program (P128938)

With an original IDA Grant commitment of US\$22.91 million, the project is entering its fourth year in implementation. The AU\$5 Safety and Security Levy on departing international passengers has been successfully implemented and is being collected, which represents a major policy achievement that will result in increased fiscal resources towards safer and more secure air transport operations. Progress to date includes: (i) construction of the security fence around Bonriki

airport to improve the safety of operations; (ii) development of a Kiribati Transport Sector Plan, and completion of an Air Service Agreement Study; (iii) completion of a Training Needs Analysis with budget available to the State for implementation. Navigational aids and communications equipment to be installed at CXI and TRW airports, and contracts for the VSAT design, supply and installation were procured as a regional good. Also completed is the assessment and specifications of rescue fire service vehicles; upgrading of the airfield rescue and fire-fighting compliance category will be achieved after a regional procurement for vehicles is tendered. An ADS-B Implementation Coordinator is supporting equipment and equipage needs, in preparation of a regional rollout of ADS-B, to be procured as a regional activity. An increased use of PASO services has been facilitated through PRIF. Additional Financing (IDA Grant) is currently under preparation to meet funding shortfalls on the original project and to improve coastal protection.

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SAMOA

Samoa Aviation Investment Program (P143408)

Subsequent to an initial IDA Grant of US\$25.0 million, the World Bank approved in June 2016 Additional Financing (IDA Credit US\$16.62 million equivalent), to scale up apron pavement expansions and fuel hydrant extensions necessary to integrate a new terminal building currently under construction. The project is completing the second year of implementation and is making reasonable progress towards the development objectives.

The AU\$5 Safety and Security Levy was activated in late 2015, representing a major policy achievement that will enable increased fiscal resources towards safe and secure air transport. Contract award for upgrading the capability of the airfield rescue and fire-fighting compliance category to meet Category 9 outcomes is awarded, with deliv-

ery of the additional vehicle expected in 2018.

Modernization of air traffic communications is also underway and includes the installation and operation of VSAT and ADS-B technologies. Other activities include bidding of the civil works tender for airfield pavements, acquisition and installation of navigation aids, airfield ground lighting, air traffic control equipment and power generation.

Key technical assistance activities also include an Air Transport Sector Strategy and an Airport Development Plan and Business Strategy for Samoa Airport Authority (SAA). An ADS-B Implementation Coordinator is supporting equipment and equipage needs, in preparation of a regional rollout of ADS-B, to be procured as a regional activity. Support for development of a Personnel Licensing System has been provided to the Civil Aviation Division (CAD). A Training Needs Analysis for both SAA and CAD has also been completed. An increased use of PASO services has been facilitated through PRIF.

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TONGA

Tonga Aviation Investment Program (P128939)

With an original IDA Grant contribution of US\$27.21 million, the project is in the fifth year of implementation schedule. The AU\$5 Safety and Security Levy on departing international passengers has been successfully implemented and is being collected, which represents a major policy achievement that will result in increased fiscal resources towards safer and more secure air transport operations. Upgrading and rehabilitation of runway pavements at both the Fua'amotu International Airport (TBU) and the Vava'u International Airport (VAV) have been completed in 2016.

Several other key activities have been completed: (i) terminal upgrade, and commissioning of requisite security equipment on site at Vava'u to support regional operations; (ii) fencing repairs at Fu-

a'amotu; and (iii) a Training Needs Analysis with budget available to the State for implementation. Navigational aids and communications contract is in place and the supply and installation is currently ongoing. The contracts for the VSAT design, supply and installation are also in place and procured as a regional good.

The terminal renovation for Fua'amotu International airport and the tanktainer to support refueling operations in Vava'u for regional flights have started in 2016. Also completed is the assessment and specifications of rescue fire service vehicles; upgrading of the airfield rescue and fire-fighting compliance category will be achieved after a regional procurement for vehicles is tendered. An ADS-B Implementation Coordinator is supporting equipment and equipage needs, in preparation of a regional rollout of ADS-B, to be procured as a regional activity. Ministry of Infrastructure and Tourism has contracted an Aviation Advisor to support with regulatory and policy guidance.

A Regional study to develop the PASO Business Development Plan and organizational restructure has been completed, financed by PRIF, and an increased use of PASO services has been facilitated through the allocated PRIF budget. The regional study on the Flight Information Region and Upper Airspace management, financed by PRIF, has been completed. An increased use of PASO services has been facilitated through PRIF.

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TUVALU

Tuvalu Aviation Investment Program (P128940)

With an IDA Grant contributions of US\$11.85 million, US\$6.06 million and US\$2.89 million, the project is in the fifth year of implementation, with a revised closing date of June 2018. The AU\$5 Safety and Security Levy on departing international passengers has been successfully implemented



and is being collected, which represents a major policy achievement that will result in increased fiscal resources towards safer and more secure air transport operations.

Further, Tuvalu has taken the necessary institutional steps for restructuring government departments with the separation of regulatory oversight from airport management within the Ministry of Communications and Transport.

Key activities include: (i) the civil works to resurface the Funafuti runway and Funafuti roads; (ii) the construction of a new terminal is under way and expected to be completed early 2017; (iii) installation of navigation aids under way; (iv) procurement of ADS-B completed and expected to be operational early 2017; (v) procurement of refurbished rescue fire vehicle completed with vehicle to be mobilized early 2017; (vi) obstacle limitation survey completed; (vii) wildlife management plan prepared; and, (viii) procurement of fire station and flight services center commenced. Increased support from PASO has helped with compliance and

oversight.

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VANUATU

Vanuatu Aviation Investment Program (P154149)

The project is in the second year of implementation, having been prepared as an emergency operation, with an original IDA Credit contribution of US\$59.5 million. Additional finance is currently being prepared for US\$14.1 million. Completed activities include the pavement coring and deflection testing, as well as temporary remedial works to the runway realized in order to ensure safe operations at Bauerfield international airport, in Port Vila. A desktop review has been completed to confirm the relevancy of the project investments for future aircraft operating types. Procurement of two airfield rescue and firefighting (ARFF) vehicles is awarded which will lead to upgrading the capability of the ARFF compliance to achieve Airport Category 8. Procurement of ADS-B ground stations for aircraft surveillance was also completed and equipment will be delivered in early 2017. Additional

technical assistance activities include the Airport Masterplan and the Aviation Sector Strategy. The project has mobilized an advisor to the CAAV to strengthen regulatory oversight. The process to introduce the AU\$5 safety and security levy is under way. The design of the rehabilitation of Bauerfield is completed, and a National Project Manager is under recruitment. PRIF funds have been made available to the state in order to facilitate the use of PASO services.

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PACIFIC ISLANDS

Pacific Aviation Safety Office (PASO)

Reform Project (P145057)

Complementary to major capital investments undertaken through PAIP, the World Bank approved a US\$2.15 million Regional IDA Grant in November 2013 to support the implementation of new business planning and processes at the Pacific Aviation Safety Office (PASO). Established in 2004 through the Pacific Island Civil Aviation Safety and Security Treaty, PASO supplements highly specialized expertise in aviation regulatory oversight to ten Pacific Island Countries. However, the financial viability of the organization has been elusive. By strengthening PASO's technical and coordination capacity, the project aims to ensure effective delivery of aviation safety and security oversight, and advisory services to PASO Member States.

The project is focused around three components, namely: (i) transitional management and support for PASO, comprising technical assistance activities that facilitate implementation of its newly adopted business plan; (ii) the establishment of a pool of regional aviation experts available to PASO member states to advise on aviation safety and security regulatory matters; and (iii) the establishment of appropriate quality assurance and information management systems.

Transitional arrangements to strengthen PASO's financial viability and effectiveness are underway:

- The regional pool of inspectors with appropriate credentials has been identified and continues to offer available qualified personnel as may be required by Member States.
- A core activity, the Financial Management and Sustainability Analysis, is well advanced with proposed alternatives under consultation with stakeholder States. Options are under review to move away from PASO's current funding structure towards a possible tiered regional safety and security levy on international passengers. The levy would then facilitate improved aviation safety and security, as PASO could more efficiently schedule inspectorate personnel, permit the full completion

of oversight work programs, and ultimately benefit passengers by increasing the integrity of the aviation system in the Pacific region.

- An aviation legal expert is making recommendations on amending the Pacific Islands Civil Aviation Safety and Security Treaty (PICASST), and the PASO Constitution to improve State accountabilities and commitment. Further, an institutional specialist familiar with executive management and the aviation industry is developing recommendations that support a new governance framework, which shall include a blueprint for implementation of the agreed recommendations. Together, the aviation legal advisor and the institutional specialist are reviewing and providing advice on governance and management aspects of the organization.
- The Employment Policy and Procedures Manual has been amended to update and improve aspects of PASO's human resource management practices (including performance management, and remuneration reviews), Health & Safety, and corporate ethics and confidentiality agreements, as well as appropriate use of IT systems that support recognized good practice in these areas. Further, the Financial Management Manual and related policies have been reviewed and updated. Development and refinement of technical regulatory inspectorate manuals, including those for Certification and Approvals, Compliance Audit and Surveillance, Accident and Incident Management, and Security are expected to be available in early 2017 to reflect industry standards and align with NZ civil aviation regulations in accordance with PASO's mandate.

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LATIN AMERICA & CARIBBEAN

Project Highlights



BOLIVIA

National Roads and Airport Infrastructure Project (P122007)

The Bolivia National Roads and Airport Infrastructure Project supports road infrastructure improvement in the department of La Paz and the upgrading of airport infrastructure and equipment in the town of Rurrenabaque in the department of Beni.



The investment is being used for the construction of a new taxiway, apron, control tower, operations building, rescue and firefighting buildings, an access road, and a passenger terminal; and the acquisition and installation of aviation control, rescue and firefighting equipment.

The actual state of the bidding process and procurement for future works is the following:

- Fire truck: The Bank has recently given the No Objection for purchasing the fire truck for the airport; purchase process negotiations are under way.
- Supervision: With the short list for Expressions of Interest, AASANA is finalizing the RFP & TOR documents for our approval.
- Civil Works: The Bank has given the No Objection to AASANA'S evaluation report for the execution of Civil Works.
- Equipment: We will shortly start the procurement process for equipment purchase and installation.

The new deadline of the project's Bank financing is July 2018.

The new 1,500 meter runway has been inaugurated on 15 November 2016 by president Evo Morales. Works were executed with a direct financing of the Department's Government. AASANA is probably going to announce the execution of the next 500 meters of runway with the same source of financing, for a 2,000 meter runway.

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GRENADA

Regional Disaster Vulnerability Reduction APL1 (P117871)

Grenada's Maurice Bishop International Airport (MBIA) functions as an important regional infrastructure site in the region's emergency response capacity. It is the alternate airport for Trinidad and Tobago, Barbados, and St. Vincent and the Grenadines, and provides air traffic support in emergency situations to the island of Saint Vincent. The continued operation of the airport is therefore critical to the region as well as to Grenada. Under the Regional Disaster Vulnerability Reduction Project, critical investments will be financed at the airport in order to comply with emergency response capability operational standards, as required by the International Civil Aviation Organization (ICAO). In the absence of these investments, Grenada and the region risk a downgrading of its airport certification.

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MIDDLE EAST & NORTH AFRICA

Project Highlights



EGYPT

Cairo Airport Development Project – TB2 (P101201)

Air transport is highly strategic for Egypt's economic development because it creates significant employment and supports the country's tourism sector. In FY09, tourism accounted for 3.5% of Egypt's GDP and generated US\$10.5 billion in revenue and 12.4 million visitors. Around 80% of tourists came through Egypt's airports, and tourists represented half of the international passenger traffic at Cairo International Airport.

About twenty years ago, the Government of Egypt realized the growing importance of air transport as a driver of growth in its own right. The Government's objective therefore became to ensure that the liberalization of air transport would contribute positively to the development of the Egyptian aviation sector.

Thus, Egypt has embarked on the gradual liberalization of international air services on a bilateral basis with several countries in the Middle East, Africa, and Europe. It has also significantly improved airport services through a range of capacity investments and the strengthening of airport operations.

Egypt needs to continue expanding airport infrastructure and improve airport services to meet growing demand, especially at Cairo International Airport, the main gateway to Egypt. It also needs to continue strengthening air traffic control infrastructure and air traffic management.

The Cairo Airport Development Project-TB2, approved in 2010 for an amount of US\$280 million, is primarily supporting the rehabilitation and expansion of the Terminal Building 2 (TB2) at Cairo International Airport, with a focus on enhancing the capacity and the quality of services of the airport (component 1 of



the project). The component 2 consists of five studies of technical assistance on various topics.

The project's objectives are to (i) enhance the capacity and the quality of services of the Cairo International Airport, and (ii) improve the capacity of key stakeholders (Ministry of Civil Aviation and the Egyptian Holding Company for Airports and Air Navigation) in the strategic planning of the air transport sector. the strategic planning of the air transport sector.

The project's beneficiaries will be: (i) business and tourism passengers, who will benefit from better airport infrastructure and services, (ii) businesses, which will benefit from extended air transport services and a more attractive area around Cairo Airport International, and (iii) workers, who will benefit from job creation through the construction phase as well as after construction, through airport activities as well as activities of industries and services in the area of Cairo International Airport.

As of now, the project has completed the construction and testing of TB2. On 28 September 2016, the airport operated two airlines in a soft opening. By the end of November, the official opening is expected to occur with all airlines operating. Munich Airport has been selected to be the terminal operator for TB2 and the interfaces with TB3.

Five studies to support the air transport development objectives of the project have been completed, including a safety and security audit. A committee has been established to monitor and evaluate the implementation of the recommendations of the five studies.

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YEMEN

Port Cities Development II Project (P088435)

The primary development objective of the PCDP II project is to improve the capacity of key transport infrastructure in the port cities of Mukalla and Hodeidah. The aviation component seeks to gain time savings for passengers landing and departing at Mukalla International Airport.

The project closed on 30 June 2015. However, due to the IDA disbursement suspension on 11 March 2015, the expansion of the Mukalla International Airport was only completed at 85%, and the airport remains closed due to the ongoing conflict in Yemen.

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IBRD/IDA: AIR TRANSPORT ADVISORY

Guatemala

A World Bank mission travelled to Guatemala on 03-14 August 2015. The mission responded to a request of the Minister of Finance and the President of Guatemala to support reforms at the customs systems and tax collection agency, including operations at ports and airports in Guatemala. The objective of the mission was to focus on operational and procedural issues of customs and passenger handling, infrastructure and airport access issues, as well as on current operations of the airport. In addition, it has been considering the regulatory oversight of the air transport sector by the authorities, as well as the current stage of the airport infrastructure and operations at La Aurora International Airport in Guatemala City.

Major findings and activities for the Airport Sector include (i) customs procedure for private and scheduled flights; (ii) airport operations (including infrastructure, rescue and firefighting); and (iii) Civil Aviation Authority and airport commercialization, where the WB will continue the dialogue in view of a commercialization of the airport operations by Private Public Partnership.

The main objective was to inquire how to improve operations, and to stop the losses generated in the current setup. While some operations could be improved by strengthening airport management, the creation of the airport company remains the important next step to advance this matter.

During a second mission to Guatemala from 01 - 12 February 2016, the WB provided technical assistance to the Government of Guatemala to review the procurement of air traffic control radars. The General Audit Unit of Guatemala is currently reviewing the procurement process for three radars, and asked the WB for technical assistance.

Preliminary findings led to the conclusion that the acquired equipment primarily serves to detect illicit flights or aircraft that have malfunctioning equip-

ment (not responding to civilian radars) over the territory of Guatemala. The mission met with the Ministry of Defense and discussed the procurement and planned integration of the radars. The mission concluded that the major shortfall of the procured radar systems was the fact that the radars were be stand-alone systems with no operational integration. In its technical report, the mission proposed concrete technical measures as to how to integrate the three radars systems into a civilian air traffic control system, which was partly implemented later that year. This is a positive outcome, as the current air traffic surveillance system was not performing well, and additional radar systems do enhance accuracy.

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Haiti

An Advanced Air Operator Assessment for Haiti and the Dominican Republic for WB Staff travel safety has been performed on 01-12 February 2016. The objective of the mission was to review, assess, and certify at least one local operator for regular or chartered flights out of Port-au-Prince to be a "no objection, cat. 3a" operator in the WBG Airline Advisory System and to review and assess a few on demand operators in Haiti and the Dominican Republic, which could be pre-cleared by the Bank's "Advanced Operator Assessment".

The outcome of the review was that one airline in Haiti was approved under certain conditions, as well as one helicopter ambulance service. In the Dominican Republic, one medevac operator was approved unconditionally, while another local operator and an airline in Turks and Caicos were not approved for on demand operations.

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Senegal

In Dakar, Senegal, an air transport mission performed an analysis of the national carrier Senegal Airlines from 13-23 October 2015. The objective was to discuss with the Government of Senegal options for the way forward of the air transport sector, given that the airline experienced significant losses and a declining passenger numbers.

The mission elaborated on some of the causes for the difficulties the carrier experienced, and highlighted the fact that a small private local operator was slowly developing and replacing some of the destinations the former carrier could not serve anymore. The WB highlighted the importance of supporting such private sector initiatives, and suggested that IFC examined possible investments.

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Pakistan

A World Bank mission traveled to Islamabad, Pakistan, from 21 August to 02 September 2015. In Islamabad, the World Bank participated in the mission on PSE Reform and Private Sector Development.

The objective was to engage with the Privatization Commission (PC) and the relevant stakeholders at a technical level and to provide support on the aviation sector and on Pakistan International Airlines (PIA), and to discuss the modalities of the Investor Road Show on power sector companies, which may include a session on air transport and was scheduled to take place in the United States in October 2015.

The mission reviewed and discussed with the PC, management of PIA, and the consultants the findings in technical, financial, and legal reports.

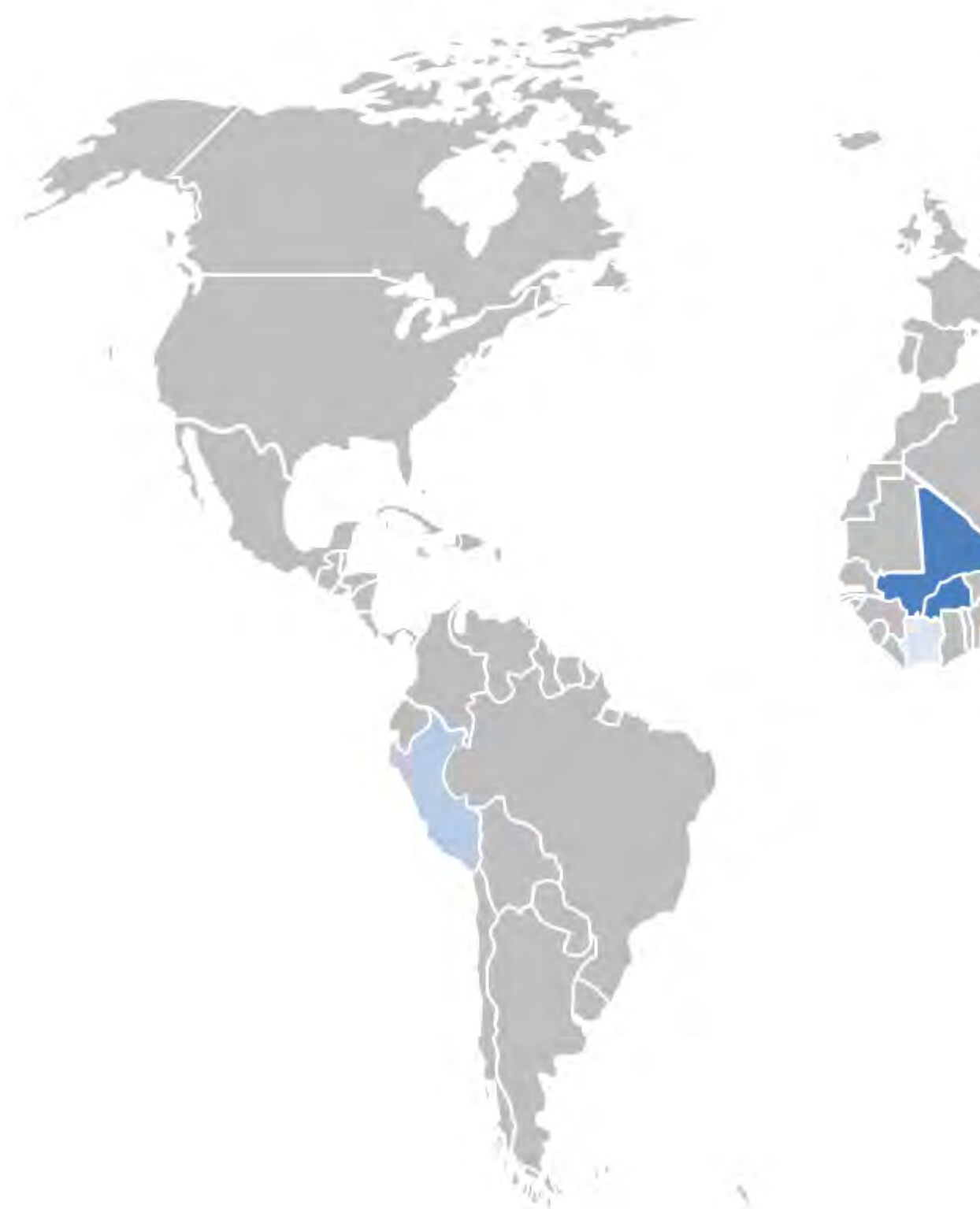
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TRANS AIR MAINTENANCE



IFC PROJECTS

IFC Air Transport Projects: The IFC provides financing to private sector companies and has traditionally financed air carriers and airport infrastructure projects.





IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of End-of-FY2016) USD*	TYPE
Africa (Mali, Burkina Faso, Uganda)	27048	AKFED Aviation: General purpose loan to a regional alliance of African Airlines	\$25 million	\$9.4 million	A Loan
Cambodia	21363	Cambodia Airports: Privatization of Phnom Penh International Airport	\$10 million	Project Closed	A Loan
Cambodia	25332	Cambodia Airports II: Privatization of Phnom Penh International Airport – required capital and investments for expansion	Up to \$17.5 million	\$2.0 million	IFC A Loan up to \$7.5 million, IFC standby up to \$10 million
Cote D'Ivoire	32061	IAS: Acquisition of up to 3 secondhand Dauphin N3 helicopters to provide transport services to leading oil and gas exploration and production companies	\$7 million	\$1.9 million	A Loan
Dominican Republic	27883	Punta Cana Airport: Capacity expansion	\$20 million	Project Closed	A Loan

IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of End-of-FY2016) USD*	TYPE
Jamaica	11353, 24676, 24306, 26202, 31658	Montego Bay Airport: Operation and expansion of Sangster International Airport; improvement of the existing terminal and the construction of a new concourse (11353)	\$20 million (11353)	Project closed	A and B Loans (11353)
		MBJ Phase 1 Swap: The proposed project is to provide a USD interest rate swap to hedge the interest rate volatility inherent in the floating rate IFC Phase 1 loans (24676)	\$1.2 million (24676)	\$0.6 million (24676)	Client Risk Management – Inter-mediation (24676)
		MBJ Phase II - Expansion and redevelopment of Sangster International Airport (24306)	\$42 million; \$20 million for IFC's own account (24306)	\$10.3 million (24306)	A and B loans (24306)
		MBJ (CUTE): Financing for new Common Use Terminal Equipment (CUTE) and Baggage Handling and Screening (BHS) systems for Sangster Int'l Airport. Project closed on 06/12/2013 (26202)	\$5 million (26202)	Project closed	A Loan (26202)
		MBJ ROS: The proposed project consists of the runway overlay of Sangster International Airport (SIA) and other safety investments (31658)	\$7.5 million (31658)	\$6.0 million (31658)	A and B loans (31658)

IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of End-of-FY2016) USD*	TYPE
Jordan	26182, 26864, 26685	Queen Alia International Airport: Rehabilitation of both airside and landside facilities	\$295 million; \$120 million for IFC's own account	\$109.8 million, \$16.9 million, \$17.4 million	IFC A Loan \$80 million and Syndicated B loan \$175 million (26182)
					IFC C \$40 million Cross Currency Swaps (26864, 26685)
Kenya	31650	KQ Airways: Expansion program consisting of the acquisition of 9 Boeing 787 Dreamliner aircrafts and 10 Embraer 190 aircrafts	\$25 million	\$6.3 million	Equity
Nepal	27247, 31446	Buddha Air: Purchase of small aircraft and long term working capital requirements	\$10 million, \$6.9 million	Project Closed	IFC A loan
		Buddha Air II: Financing to BAPL (Buddha Air Private Limited) to purchase its second ATR-72 aircraft. Investment fully repaid			
Peru	24489	Lima Airports Partnership: Financial restructuring and assistance in conjunction with Fraport	\$20 million	\$16.8 million	Equity

IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of End-of-FY2016) USD*	TYPE
Russian Federation	28218	Pulkovo Airport: Financing to expand, develop, operate and maintain airport	\$236 million; \$101.3 million for IFC's own account	\$72.7 million	A & B Loans
Tunisia	26913, 28076	TAV Tunisia: Construction of a new airport in Enfidha, with an initial capacity of 7 million passengers per year, and rehabilitation of the airport in Monastir	\$253 million; \$184 million for IFC's own account	\$106.6 million (26913)	IFC A Loan, Subordinated Loan, Syndicated B Loan, Equity
Africa Region	32546	ASECNA: Financing to enhance member countries' airport facilities and to reinforce air traffic security in the region.	\$36.03 million	\$30.7 million	A Loan
Jordan	34536	Queen Alia II: Stage 2 of expansion and rehabilitation of QAIA consisting of demolishing of the old terminals and an extension of the piers with additional contact gates	\$93.8 million; \$21.2 million for IFC's own account	\$21.2 million	IFC A Loan, Syndicated B Loan and Parallel Loan
Croatia	31969, 34380,	Zagreb Airport: Construction and operation of a new passenger terminal and related infrastructure at Zagreb Airport and the existing facilities.	\$72.65 million for IFC's own account (31969)	\$60.9 million (31969)	A Loan, Equity, and C Loan (31969)
		Zagreb Air Hedge: Interest Rate Swap	\$1.2 million for IFC's own account (34380)	\$6.7 million (34380)	Client Risk Management (34380)

IFC: PROJECT HIGHLIGHTS

AFRICA: AKFED Aviation (27048)

The Aga Khan Fund for Economic Development (“AKFED”), through its Aviation Services division, is currently expanding its activities in both East and West Africa. The aim of the division is to assist in maintaining the critical aviation infrastructure in support of economic development and to provide much needed regional airline services in Africa. IFC’s involvement with the organization includes a corporate loan of up to US\$25 million to AKFED for on-lending to its three airlines: Air Burkina, Air Mali and Air Uganda. This allows AKFED to consolidate all of the division’s airlines and aviation activities and optimize routing, synergies and overall effectiveness across the group’s airline operations.

Loan proceeds will be used to fund fleet acquisition cost (introduction of nine refurbished MD-87 and two MD-83 aircraft) and other airline development costs including training of crews and engineers, purchase of spare parts, and improving maintenance facilities.

The project is expected to promote inter-regional and international trade in the region. Additionally, the project is also expected to provide a boost to tourism. Continued trade and economic growth in Africa is contingent on further investments and improvements in regional transport infrastructure and services. The division’s operation will fill the service gap that exists today and will result in increased frequencies for existing destinations as well as the addition of new destinations, better passenger service and improved efficiency and safety. Such improvements will increase the connectivity, competitiveness and attractiveness of these countries’ economies. Moreover, the project will support regional integration by assisting the development and expansion of a group of regional airlines.

SUB-SAHARAN AFRICA: ASECNA (32546)

The Agence pour la Securite de la Navigation Aerienne en Afrique et a Madagascar (ASECNA) is a multi-state governmental agency. It was created in 1959 and is composed of 18 member countries (Benin, Guinea Bissau, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo, Cote d’Ivoire, Equatorial Guinea, France, Gabon, Madagascar, Mali, Mauritania, Niger, Senegal, and Togo).

ASECNA is responsible for the design, implementation and management of facilities and services related to the transmission of messages and traffic information, guiding aircrafts, air traffic control, forecasting and reporting meteorological information, for traffic route, approach and landing at airports in African members countries. It is also in charge of the maintenance of all facilities required for the implementation of these services, including the management of an airspace covering 16 million square km, with a total of 32 airports.

IFC investment consist of an A loan of USD\$36.03 million aimed at financing a list of specific infrastructure refurbishment including purchase and installation of back-up power equipment in a number of member countries in Africa. The loan is designed to promote regional and integration and improve air space management facilities, infrastructure, and communications thus enhancing member countries’ safety in the air transportation sector.

COTE D’IVOIRE: International Aircraft Services (32061)

The project, which was approved in March 2013, provides financing of US\$7 million to International Aircraft Services (IAS) for the acquisition of up to



three secondhand Dauphin N3 helicopters by IAS. The helicopters will be used to provide transport services to leading oil and gas exploration and production companies in Cote d'Ivoire and the Western African region. The project will enable IAS to modernize its fleet with newer helicopters to meet its client needs.

IAS is an aviation operator and maintenance company created in 2002 and registered with the Ivory Coast Civil Aviation Authority. It provides mostly helicopter transport services to the oil and gas industry in Cote d'Ivoire and to the mining industry in West Africa. The company currently owns 13 helicopters and employs 25 pilots. IAS is based in Felix Houphouet-Boigny International Airport, which is approximately 16 km South-East of Abidjan.

The expected development impact will be developing local know-how, and support the development of exploration and production of natural gas activities by providing reasonably priced transportation services. The project also hopes to create a demonstration effect by providing financing to a

company in a post-conflict country to pave the way for more investments in the future.

CROATIA: Zagreb International Airport (31969)

The IFC is supporting the development of a terminal at Zagreb International Airport as part of a Public Private Partnership (PPP). The new US\$450 million terminal, built by a consortium supported by IFC, is expected to contribute to economic growth and tourist activity. Tourism is a major driver of employment in Croatia, and improved infrastructure will develop the sector and boost GDP. IFC is committing US\$72.65 million to the project, including a loan of up to US\$47 million and an equity investment of nearly US\$26 million. The concession includes financing, design, and construction of the terminal, along with airport operation until 2042.

The new terminal will be 65,000 square meters and is expected to welcome 5 million travelers per year when it opens in 2017, compared to the cur-

rent capacity of 2 million. An average of 400 new jobs are expected to be created during construction, and up to 700 at peak. For the first time in Croatia private firms involved in a transport concession project have assumed passenger volume risks, enabling the country to upgrade essential infrastructure without adding a burden to state finances.

KENYA: Kenya Airways Expansion Plan (31650)



Kenya Airways Ltd. (KQ) the national flag carrier of Kenya and the third largest airline in Sub-Saharan Africa (in terms of seat capacity offered) is in the midst of implementing a strategic fleet and network expansion plan. It is focused on growing its passenger network and diversifying its fleet to match the network needs, as well as launching a dedicated freighter division. Having reached a critical mass and achieved a solid financial position, KQ finds itself well positioned to capitalize on the growth prospects and opportunities that the African region and the international market present.

KQ's strategic intent is to establish its brand and its presence in the most important intra-African markets as well as become a significant player in long haul origin-destination city pairs that are expected to grow over the next few years. To implement the project, the company has placed firm orders to aircraft manufacturers in connection with the acquisition of nine Boeing 787 Dreamliner aircraft and ten Embraer 190 aircraft.

IFC's support of Kenya Airways expansion plan is expected to have significant development impact. At the regional level of Sub Saharan Africa, the launch of the freighter division coupled with the

opening of new intra-Africa destinations will contribute to markets integration and will reduce the transactional costs of trade, an aspect that is extremely important to promote the economic development of the SSA economies.

KQ's entry into new international markets will also promote competition as well as provide a key transportation link between growing economies in the Middle East and Northern Africa region and Asia promoting international trade, South-South Investments and tourism to and from Africa.

NEPAL: Buddha Air II (31446)

Air connectivity is a key requirement in Nepal given its difficult terrain and poor road network. Domestic airlines are needed to provide reliable and safe air services. With tourist arrivals in Nepal growing at 12% annually since 2006, and a greater focus on tourism revenues with GDP growing approximately at 4.5% p.a., the requirement for domestic tourist airline seats is expected to grow even further.

Buddha Air Private Limited is a closely held private limited company providing air services since 1997. BAPL currently has 357 seats across a fleet of three Beechcraft (18 seats), three ATR-42s (47 seats) and two ATR-72 (72 seats). The expansion to its current fleet had been partially financed by an IFC corporate loan of US\$10 million in FY09. BAPL had a 42% market share by passengers in the first half of 2011, and was the first one to bring in larger 45 seater turbo prop aircraft for domestic routes in Nepal and also the first to fly to Bhutan and to towns across the Indian border.

The project Buddha Air II addresses two pillars of CSA strategy; (i) by facilitating passenger and cargo transport between India and Nepal it supports regional integration; (ii) by enhancing transport and access across Nepal at reasonable cost, it supports inclusion in Nepal. The project also fits well with the FY11-13 WBG ISN which highlights connectivity and private sector growth.



IFC has been providing financing of US\$6.9 million to BAPL for acquisition of a second ATR-72 aircraft which BAPL is currently operating on a lease basis, and helped the Company enhance safety standards for the IATA IOSA audit.

Contact persons for all IFC projects is Paula Pardo Pachon at ppardo@ifc.org

IFC: AIR TRANSPORT ADVISORY MANDATES

The Infrastructure Advisory Services Department of the IFC provides advisory assistance to governments on structuring and implementing (tendering) Public-Private-Partnerships (PPPs) in infrastructure. IFC has undertaken more than 100 advisory transactions in over 67 countries over the last 20 years. IFC/World Bank's reputation for competence, transparency, and fairness allows it to play the role of neutral partner to balance each party's interest, thus reassuring foreign investors, local partners, other creditors, and government authorities. The two main domains in air transportation advisory services are private sector participation in airports and air carriers.

1) IFC Public-Private Partnerships (PPP) Advisory Mandates in Airports

Only a fraction of the world's commercial airports are managed or owned by private sector entities. However, as passengers carried by air transport has neared 3.8 billion in 2016, and more than one-third in value of all merchandise and goods were air freighted – Public-Private-Partnerships (PPPs) in airport infrastructure will grow to meet investment and required service standards. Airport PPPs are useful approaches to meet both private and public sector objectives.

Of the various airport PPP models available, experience shows that concessions and full divestiture are most effective:

- Concession Contracts (BOT, BOO, BOOT, BTO, etc.): State retains ownership of airport but transfers investment as well as operations and management responsibilities to the private sector
- Full Divestiture: Ownership, operations, and investment responsibilities are fully transferred to the private sector.
- In certain cases, a blend of first-phase BOT followed by public offering can maximize benefits

In certain cases, a blend of first-phase BOT followed by public offering can maximize benefits.

2) IFC Public-Private Partnerships (PPP) Advisory Mandates in Airlines

As the airline industry has proceeded along this privatization path over the last 30 years, IFC has participated in nearly a dozen airline transactions. Unfortunately, many have proved to be difficult projects due to important sector-specific structural reasons:

- Fixed-cost structure: Airlines tend to build up a legacy-costs base (staff and fleet) that is difficult for a new owner to manage. In addition, fuel costs are beyond management's control. During the period of higher oil price in 2011-2014, they accounted for as much as 30% of the cost base (up from 15-20% in 2009), and have since dropped with declining oil prices (variations according to individual airline hedging strategies).
- Price-sensitive product: Demand for travel is highly elastic, especially in tourist markets. In recessions, people forgo vacations for other consumer goods. Conversely, price reductions increase passenger numbers dramatically.
- Complicated demand chain: Customers often purchase tickets through travel agents, frequently in a package with hotel accommodations. Since airlines rely on these other actors for their sales, if there are bottlenecks elsewhere the aviation sector suffers.
- Overregulation: Bilateral agreements between governments, still prevalent in many parts of the world, prevent competition from functioning normally. Open skies are being adopted, but not in all countries.

3) IFC Air Transportation Experience

When undertaking a transaction advisory mandate, IFC provides a one-stop solution to governments covering all aspects of the proposed transaction. One of the distinguishing features of IFC's value addition is its ability to balance private and public sector interests and take into account sustainable long term economic and social effects.

Selected IFC Advisory Mandates in Airports

PROJECT NAME	COUNTRY	YEAR	MANDATE/RESULT
Jeddah Airport	Saudi Arabia	2014-ongoing	Project on-hold
Taif Airport	Saudi Arabia	2014-2016	Due diligence completed
Brazilian Airports	Brazil	2014	Galeao and Confins Airports successfully awarded to Changi and Zurich Airport led consortiums respectively
Saint Lucia Airport	Saint Lucia	2013-ongoing	On-hold
Madinah Airport	Saudi Arabia	2012	Successfully awarded to TAV, Saudi Oger, Al Rajhi consortium
Dili Airport	East Timor	2012-2015	Project Due Diligence and Structuring finalized
Jamaica Airports	Jamaica	2011-ongoing	At RFP stage
Queen Alia Airport	Jordan	2007	Successfully awarded to Aéroports de Paris, ADIC, J&P, Noor consortium
Hajj Terminal	Saudi Arabia	2007	Successfully awarded to Saudi Bin Laden Group, Aéroports de Paris con-
Abuja Airport	Nigeria	2006	Successfully awarded to Abuja Gateway consortium (Airport Authority and equity partners)

Selected IFC Advisory Mandates in Airlines

PROJECT NAME	COUNTRY	YEAR	MANDATE/RESULT
Air Jamaica	Jamaica	2009	Awarded to Caribbean Airlines
Drukair	Bhutan	2008	Strategic analysis
JAT	Yugoslavia	2006	Strategic analysis
Polynesian Airlines	Samoa	2005	49% sold to Virgin Blue
Cameroon Airlines	Cameroon	2005	Awarded but cancelled by Government
Air Tanzania	Tanzania	2002	49% sold to SAA
Kenya Airways	Kenya	1996	76% sold to KLM, financial investors

PROJECT EXAMPLE: BRAZIL

GALEÃO AND CONFINS AIRPORTS

Building on a previously completed round of concessions from 2011, the Brazilian Development Bank (BNDES) approached IFC in mid-2012 to assist with the second round of airport concessions, covering Galeão and Confins airports, in cooperation with Estruturadora Brasileira de Projetos (EBP). The National Aviation Secretary (SAC) authorized EBP to develop the financial, engineering, and environmental studies necessary for the two airport projects. In order to undertake these activities, EBP and IFC signed a Cooperation Agreement, with IFC focusing principally on the technical work stream. Both projects closed in April 2014.

Galeão International Airport is located in the southeast region of Brazil; the airport serves as a major air transportation hub for the country and region. The Galeão project was structured as a 25-year concession, through which the operation and management of assets is transferred to the concessionaire. The concessionaire is responsible for providing all necessary investments, including civil works, to meet growing demand. Galeão airport was awarded to the Aeroportos do Futuro consortium, composed of Odebrecht, a leading Brazilian

engineering and construction company, and Changi Airport Group. The winning bid was US\$7.9 billion, and US\$ 2 billion will be invested over the concession term.

Confins International Airport, is the main commercial airport in the Belo Horizonte region, with a population of approximately six million people. The project was structured as a 30-year concession, through which the O&M of assets is transferred to the concessionaire. The concessionaire has the responsibility to provide all the necessary investments, including civil works, to meet growing demand. Confins was awarded to the Aerobrasil consortium, composed by CCR/SA, a large Brazilian engineering and construction company, and Flughafen Zurich AG. The winning bid was US\$750 million, and US\$1.2 billion will be invested over the concession term.

Contact persons for all IFC air transport advisory services projects are Ramatou Magagi at rmagagi@ifc.org and Alexandre Leigh at aleigh@ifc.org

MIGA GUARANTEES

Guarantees provided by the Multilateral Investment Guarantee Agency (MIGA) cover projects in a broad range of sectors, with projects in infrastructure accounting for the largest share (41%) of the agency's portfolio. Infrastructure development is an important priority for MIGA given the estimated need for US\$230 billion a year solely for new investment (maintenance needs are of a similar magnitude) to deal with rapidly growing urban centers and underserved rural populations in developing countries. Two examples of projects undertaken by MIGA include Jorge Chavez International Airport in Peru and New Airport in Ecuador.

EQUADOR: New Airport at Quito

MIGA issued three guarantees of US\$32.8 million, US\$16.4 million, and US\$16.4 million to the Aecon Group INC. of Canada, the HAS Development Corporation of the United States, and ADC Management Ltd. of the United Kingdom for their respective shareholder loans to Corporacion Quiport of Ecuador. In addition, MIGA also issued guarantees of US\$450,000, US\$225,000, and US\$225,000 for the investors' respective equity investments in the project enterprise.

The Aecon Group and HAS Development Corporation have coverage for a period of 14 years for their shareholder loans, while the remaining four guarantees are for a period of 15 years. Each guarantee provides coverage against the risks of Transfer Restriction, War and Civil Disturbance, and Breach of Contract.

The project involves the construction of a new airport near Puembo, 24 km outside the capital city of Quito. The project will be a key economic driver for sustainable eco-

nomie development of the metropolitan region of Quito. The airport replaces the existing airport in the city of Quito, which suffers from safety deficiencies as well as capacity constraints.

PERU: Jorge Chavez International Airport (JCIA)

MIGA provided Fraport AG of Germany with a guarantee of US\$11.5 million to cover its US\$12.8 million counter guarantee for a performance bond posted for the privatization of Lima's airport, Jorge Chavez International Airport (JCIA). The coverage is against the risk of expropriation (the wrongful call of the performance bond), and extends for eight years.

The Peruvian government views airport privatization as central to its efforts to expand employment opportunities, and create a modern transportation facility to serve as the country's gateway to the world. It will also enhance and expand tourism, another key government goal.

During the first four years of the concession, the consortium is expected to invest over US\$130 million in new infrastructure, including upgrades to the current terminal, construction of a new passenger concourse, expansion and addition of new aircraft aprons and taxiways, and creation of a hotel and retail center within the existing airport perimeter.

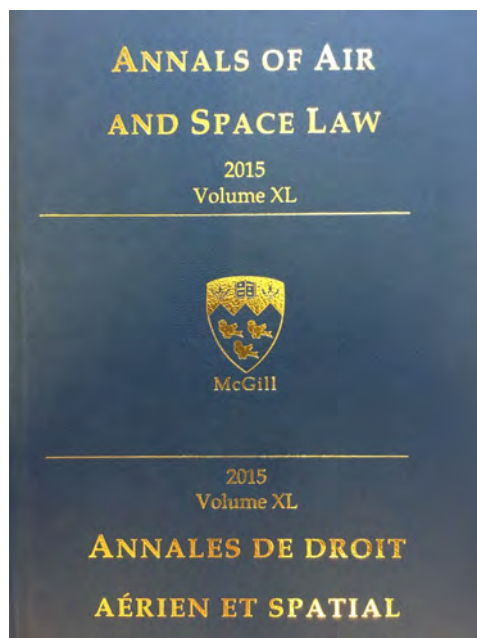
Contact person for all MIGA guarantees is Carlo Bongianini at cbongianini@worldbank.org

AIR TRANSPORT COMMUNITY OF PRACTICE

ANALYTICAL WORK: PUBLIC PRIVATE PARTNERSHIPS (PPP) IN AIRPORTS

Several analytical knowledge products were in progress during FY 16. One article on the role of the public sector when establishing a Public Private Partnership (PPP) in airports, was published in the Annals of the Institute of Air and Space Law of McGill University. The article is countering the perceived notion that the public sector's role diminishes when establishing a PPP, by arguing that good governance, adequate supervision, and transparent communication with the public are key functions that governments need to provide. The article further discusses different models of PPP, which range from a simple management contract to full divestiture of an airport. One interesting particularity is that the commonly used term "concession" has a different meaning in terms of ownership and responsibilities in common law compared to civil law.

Public-Private Partnerships in Airports: Imperatives for Governments, Charles E. Schlumberger and Shruti Vijayakumar, Annals of Air and Space Law, Volume XL, McGill University, Montreal, Canada.





AIR CARRIER ADVISORY SYSTEM

WORLD BANK STAFF AIR TRAVEL

The Bank has maintained an evaluation tool for assessing risks associated with air travel for mission travel since 2008. The air carrier advisory system developed by the Bank's General Services Department and Air Transport team was launched in FY2011. Airline ratings/risk are based on the following criteria:

Risk Criteria:

1. *Serious accident in the last 3 years (defined as any incident that results in injury or death of a passenger, or substantial damage to the aircraft)*
2. *Registered in a country with poor oversight (based on ICAO safety audit)*
3. *A flag of convenience airline (an airline that is registered and maintained in a country other than where it operates)*
4. *Use of aircraft over 20 years old*

Overall there were 194,434 flights booked by American Express for Bank staff in Fiscal Year 2016 (from HQ), representing an increase in traveling by more than 14% compared to Fiscal Year 2015. The majority of flights booked were with airlines considered to be "Good to fly". Note: This data does not capture trips arranged in the regions.

Travelers should be aware that surface transportation may not always be possible or may represent more risks than air travel in some client countries. The advisory team continues to provide on-demand assessments and safety advice for operational staff.

	DESCRIPTION	RECOMMENDATION FOR STAFF
1	All airlines that are industry certified by having passed an IATA IOSA audit, unless subsequent safety experience indicates a safety problem.	Good to fly. The Bank has no objection to using these airlines.
2	All airlines that though they are not industry certified are either licensed by a country with an FAA IASA rating of Category 1, or are known to the Bank as safe carriers.	Good to fly. The Bank has no objection to using these airlines.
3	All airlines that are not in (1) or (2) above, or are on any blacklists, or are deemed to be unsafe for other reasons.	<p>3a. Airlines that do not qualify for Category 1 or 2, but have been reviewed by the Bank's air transport specialist and considered good to fly.</p> <p>3b. Airlines that have 1 of the 4 risk criteria listed below, or some other safety factor that has been raised by the Bank's air transport specialist. Check to see if there are any viable and safer transport alternatives before selecting this airline for mission travel.</p> <p>3c. Airlines with significantly elevated risk and 2 or more of the 4 risk criteria listed below, or some other safety factor that has been raised by the Bank's air transport specialist. Use only for essential missions and only if no viable and safer transport alternatives are available.</p>



ACI-WBG ANNUAL AVIATION SYMPOSIUM

The WBG continues to strengthen its partnership with Airports Council International

The objective of this annual event with the air transport industry is to take stock of the main issues, challenges, and opportunities the industry is facing. With participants' affiliations ranging from airport operators, fi-



(ACI). In March 2016, the two organizations joined forces to host the second ACI-WBG Aviation Symposium, held annually in London prior to ACI's Annual Finance and Economics Conference, of which WBG is a supporting partner going forward.

The WBG delegation was led by Dr. Charles E. Schlumberger, Lead Air Transport Specialist at The World Bank, and included World Bank and IFC staff participation. WBG staff highlighted the Bank's role in aviation finance and development, focusing on the priority of improving air transport in small island nations, landlocked developing countries and many parts of Africa (especially West Africa), including needed policy and regulatory reforms and facilitation of private investments.

financial institutions, regulators, rating agencies and advisory firms, in my view the ACI-World Bank Aviation Symposium and the ACI Airport Economics & Finance Conference & Exhibition has been again a unique occasion where the industry committed to sit together to exchange knowledge, network, share analyses, and set the course for the upcoming years.

A post-conference report was prepared by Aldo Giovannitti, Aviation Specialist at World Bank. It summarizes discussions that took place during the 2nd ACI-World Bank Aviation Symposium (7 March 2016) and the 8th ACI Airport Economics & Finance Conference (8 and 9 March 2016).

COOPERATION WITH INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

ICAO is the specialized air transport agency of the United Nations. The WBG and ICAO have a long history of cooperation in the development of the air transport sector in emerging and developing countries. The field of cooperation includes air transport policy, safety and security, facilitation, airport and air traffic control infrastructure, and the environment.

While the WBG cannot directly finance activities of ICAO, it is able to include technical staff of the secretariat on missions and project work. In addition, the WBG can fund support services by the Technical Cooperation Bureau (TCB) of ICAO if these are procured in accordance with the credit or grant agreement between the WBG and the client.

The WBG and ICAO have been working closely together on various air transport project issues. For example, in the past, ICAO has provided safety and security audits and supervisory services for WBG projects in West and Central Africa and the South Pacific. ICAO has also assisted in identifying needs and priorities of air transport projects in a number of other countries.

Finally, the WBG continues to foster relations with other international partners, such as Regional Development Banks (e.g. Inter-American Development Bank, African Development Bank or Asian Development Bank) or Regional Economic Communities (e.g. European Union, African Union or the Association of Southeast Asian Nations) to engage in WBG funded air transport projects.



6TH MEETING OF THE NORTH AMERICAN, CENTRAL AMERICAN, AND CARIBBEAN DIRECTORS OF CIVIL AVIATION (NACC/DCA/06)

The World Bank Group has been represented at the International Civil Aviation Organization (ICAO)'s Sixth Meeting of the North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/06) in Nassau, Bahamas.

The main objective of the mission was to give a presentation on how the WBG can support client countries in the development of air transport. Also have been identified major issues arising from the discussions and potential opportunities for WBG engagement in the region. The World Bank was the only development bank represented at the meeting (the organizers had wanted all the banks to participate but this was not possible due to the short notice).

The areas covered are the following:

WBG Engagement

It has been presented how the WBG can support client countries in air transport development, and highlighted the WBG's funding mechanisms, project examples and areas of intervention, and benefits of a regional approach (particularly for small island developing countries).

ICAO's No Country Left Behind (NCLB) Initiative

A major theme of the meeting was the progress on ICAO's *No Country Left Behind (NCLB)* initiative launched in 2014. The campaign's main goal is to ensure global harmonization of standards so that all states have access to the significant socio-economic benefits of a safe and reliable air transport system. However developing countries, in particular, face major challenges towards meeting this goal. As articulated during the sessions, third-party funding from donors such as the WBG can play a key role in supporting states' compliance with ICAO's Standards and Recommended Practic-

es (SARPs).

Training

The topic of training was widely discussed during the meeting particularly in relation to training capacity, the demand for skilled aviation personnel, and attractiveness of aviation. There was a recognized lack of incentives (retention of technical staff is problematic due to competition with private sector) and a need for more inspectorate training programs. In this context, Regional bodies could provide critical support. Operating RSOOs in the region include the Central American Intergovernmental Corporation/Central American Agency for Aviation Safety (COCESNA/ACSA), Caribbean Aviation Security and Safety Oversight System (CASSOS) and the Action Programme for Safety (PASO) group.

Environment

Under Resolution A38-18 from ICAO's 38th Session Assembly (24 Sept – 4 Oct 2013), states were asked to submit voluntary action plans for reducing CO2 emissions from international aviation. The action plans allow states to identify, from a basket of measures, mitigation activities and assistance needed to implement measures. This basket of measures draw on different ways to mitigate/reduce aviation CO2 emission from aircraft related technology development, alternative fuels initiatives, improved air traffic management and infrastructure use, market-based measures (MBMs). One area that was highlighted was the use of solar energy at airports e.g. the installation of solar panel at airport gates in Jamaica, and further progress in this area was encouraged, building on best practices. By April 2016, 92 states have submitted an action plan globally (representing more than 88% of global passenger traffic).

COMMUNITY SERVICE

Several World Bank staff members are licensed and active pilots, certified by the US FAA and/or European Aviation Authorities EASA. To remain current on their pilot qualifications, they regularly fly and undergo required refresher training. The most rewarding way of keeping current is to engage in community service by providing free air transportation to people of all ages whose medical needs – evaluation, diagnosis, and treatment – can only be met by health care facilities far from their homes.

In the US, the not-for-profit organization Angel Flight provides timely travel to patients who cannot withstand traveling long distances by automobile, rail, or bus, or who do not have the financial means to use suitable alternative transportation. Oftentimes, transport in smaller, private aircraft can better accommodate patients whose conditions could worsen if exposed to the re-circulated air on commercial flights, or who need efficient point-to-point transport.

One example of an Angel Flight mission, which was carried out by Charles E. Schlumberger, Lead Air Transport Specialist and Christopher de Serio, Transport Specialist at the World Bank, was a flight to transport an elderly cancer patient from her home in Roanoke, Virginia, to her treatment on Long Island, New York.

The WBG's contribution, in accordance to Staff Manual 9.10, consisted of one day of administrative leave to carry out this rewarding community service.

Contact person is Charles E. Schlumberger at cschlumberger@worldbank.org.

For more information visit: www.angelflighteast.org.



The global outlook for air transport for Fiscal Year 2017 remains positive, despite that a certain slowdown in growth is expected. According to IATA, the demand for air travel continues to grow in 2017 with passenger departures increasing 4.9% to 3,96 billion. This growth is still significantly above world GDP of 2.5%, which points to the fact that air travel remains a high priority expenditure for many. Especially in emerging markets, expected growth in air travel remains strong: 9% in the Middle East, 7.0% in Asia-Pacific, and 4.5% in Africa. Nevertheless, not all growth is financially sustainable. For example, airlines in Africa forecast to lose another US\$800 in 2017.

The role of air transportation in economic development continues to strengthen, as global trade recovers and freight transported started to increase moderately. IATA forecasts that value of international trade shipped by air in 2017 will reach US\$ 5.7 trillion, and tourists travelling by air will spend US\$681 billion. Finally, tax revenues generated by the airline industry will increase by 5% to US\$ 123 billion. Global connectivity, measured in the number of unique city-pair connections, is expected to reach more than 18,429 in 2017, representing a 95% increase since 1995.

The expected growth of the industry with its economic impact on poor and emerging countries makes air transportation an important tool for addressing the WBG goals of ending extreme poverty and boosting shared prosperity. However, lesser developed countries need to maintain the same standards and quality of infrastructure as in developed markets. Emerging countries with strong growth rates should mobilize private funding to create Public Private Partnerships (PPP) for funding of needed infrastructure. On the other hand, poorer countries with low air traffic may face the challenge that PPPs are difficult to establish. They may depend on public funding, which is supported by donors. Nevertheless, both, poor and emerging countries, need to maintain regulatory oversight that meets international standards.

Given the above mentioned, the WBG is increasingly fostering investments by the private sector in emerging countries, be it by directly financing the private sector through IFC or be it by supporting the establishment of PPPs. This may result in the WBG air transport portfolio to further decline due to reduced IBRD financing, while

IFC may increase its activities on advisory services and investment financing of private entities. In poorer countries, the WBG will continue to support investments for selective air transport infrastructure. Currently, the main focus is on some African countries, and on several Pacific Island States, which are modernizing their aviation infrastructure.

Aviation remains the strongest growing emitter of greenhouse gases. To address the challenge of climate change, the 39th Assembly of ICAO adopted two resolutions. These endorsed a basket of measures, including technology, operations, alternative fuels, and a Market-Based Measure, the Carbon Offsetting and Reduction Scheme for International Aviation. For implementation of these measures, states need to prepare action plans. The WBG will support client countries in capacity building for the preparation and implementation of these plans. Furthermore, the WBG will provide carbon off-set solutions by its Carbon Finance unit.

The focus, in terms of research, will be on air transport development in Africa. Given the importance of air transportation in Africa, and given the fact that airlines continue to struggle, a joint WB – IATA research project will be launched, which will analyze the causes and issues that are hampering air transport development in Africa. Working in cooperation with the African Development Bank and ECOWAS, five West African countries will be analyzed with special focus on taxes, fees, and infrastructure cost of the sector. The findings and derived policy recommendations will then be discussed in high-level meetings and workshops.

Finally, we will continuously enhance our productive partnerships with the air transport industry, as well as with bilateral and international partners, as it is essential for achieving our set development objectives. The WBG has partnerships with ICAO, ACI, IATA and other relevant partners on projects, including providing policy advice and technical capacity building. In addition, the WBG is cooperating with other multinational and regional development banks, and bilateral partners to enhance investments in aviation.



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