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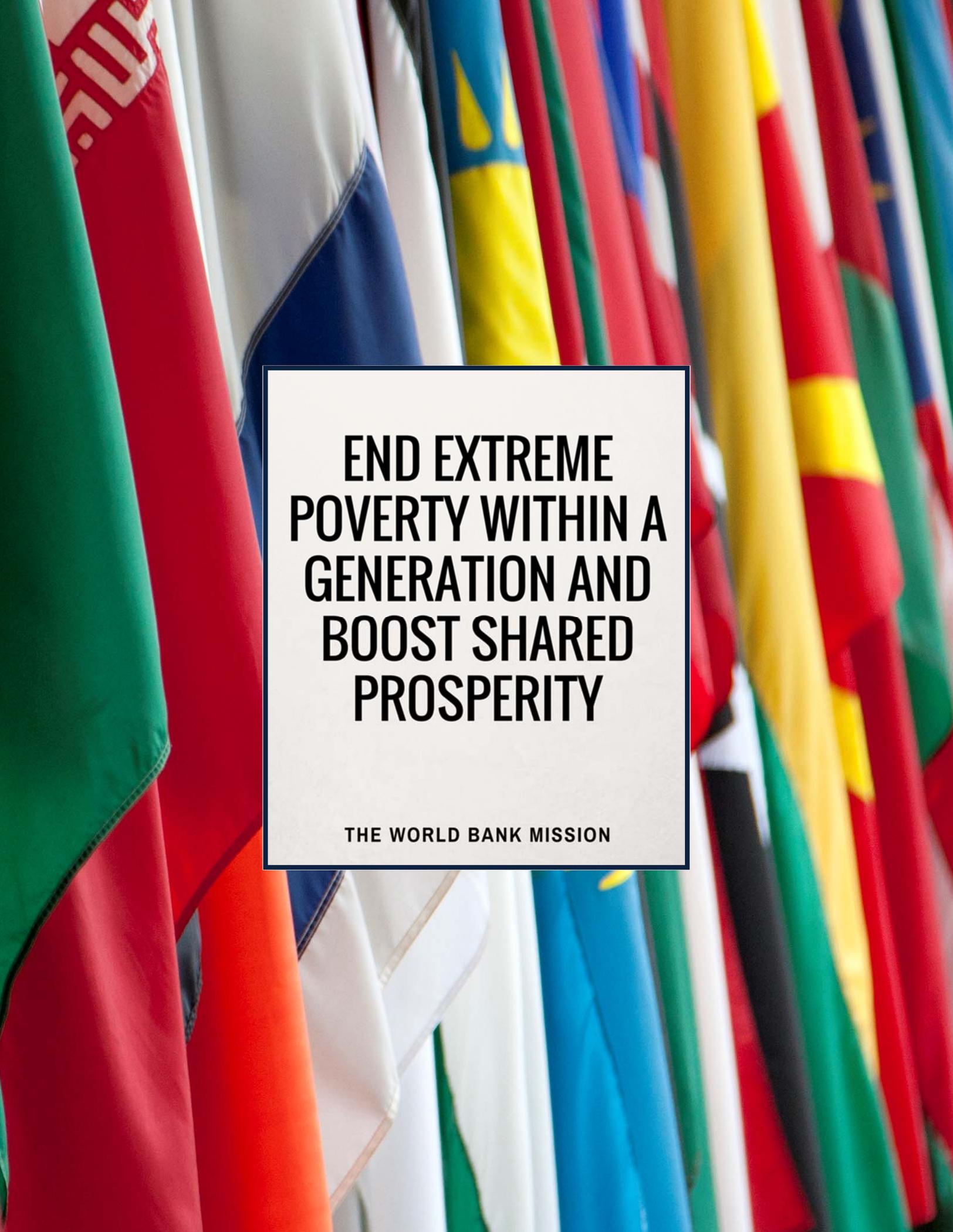
AIR TRANSPORT

ANNUAL REPORT 2021

Transport Global Practice







**END EXTREME
POVERTY WITHIN A
GENERATION AND
BOOST SHARED
PROSPERITY**

THE WORLD BANK MISSION



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FINANCING SAFE, AFFORDABLE, AND SUSTAINABLE AIR TRANSPORT WITH PRIVATE SECTOR PARTICIPATION

After the devastating impact of the COVID-19 pandemic during FY20, air transportation initiated in FY21 the process of a slow, but uneven recovery around the world. However, international passenger demand in 2021 remained 75.5% below 2019 levels, while capacity (ASK) declined to 65.3% and the global load factor fell 24.0 percentage points to 58.0% compared to 2019. The domestic markets experienced the strongest improvements in 2021 resulting in a recovery to only 28.2% below their 2019 level, primarily in the US and in China.

In terms of regional differences, international traffic in the Asia-Pacific shrank 93.2% in 2021 compared to 2019, which was the deepest decline for any region. In comparison to 2019, capacity was down 84.9%, and the load factor fell 44.3 percentage points to 36.5%. This was followed by the passenger volumes in the Middle East in 2021, which remained 71.6% below 2019. Their annual capacity fell 57.7%, and their load factor dropped 25.1 percentage points to 51.1%. European markets suffered a 67.6% traffic decline in 2021 versus 2019, while capacity was reduced to 57.4% with a load factor decrease of 20.6 percentage points to 65.0%. Latin American airlines experienced a 66.9% traffic decline compared to 2019 and capacity fell 62.2%, with a load factor dropping 10.2 percentage points to 72.6%, albeit the highest among all regions. North American airlines' traffic declined by 65.6% compared to 2019, capacity dropped 52.0%, and their load factor sank 23.8 percentage points to 60.2%. Finally, the best performance among all regions was achieved by African carriers, which experienced a drop in international traffic of 65.2% compared to 2019, while capacity was reduced by 56.7%, with load factors shrinking by 14.1 percentage points to 57.3%. However, in terms of passenger traffic market shares by region, North America leads with 32.6%, followed by Asia-Pacific at 27.5%, Europe at 24.9%, the Middle East at 6.5%, Latin America at 6.5%, and Africa at 1.9%. In conclusion, the impact of COVID-19 resulted in a 40% decline in airline capacity in 2021, with 2.2 billion fewer passengers flown than in 2019, creating revenue losses of USD 324 billion and a net loss of USD 51.8 billion.

The prolonged impact of the pandemic drove many airlines into a difficult financial situation and, without state aid, to bankruptcy and possible liquidation. By 2021, over USD 200 billion have been provided to airlines in 87 countries. While the largest share went to US carriers (USD 93 billion), followed by Europe (USD 55 billion), and Asia-Pacific (USD 43 billion), many operators in developing countries received little or no support. However, some developing countries, which provided aid to their airlines, often did this at a high public expense. For example, Fiji granted financial aid in 2021 representing 7.27% of its GDP, followed by Cape Verde (7.04%), Mauritius (4.63%), and Vanuatu (2.47%). Of state aid provided globally since the start of the pandemic, 48% consisted of debt and 52% of grants and capital injections.

After a sharp drop in cargo ton-kilometers (CTKs) in the first quarter of 2020, the global air cargo market recovered well in 2021, with CTKs approximately 5% higher than the pre-crisis peak in August 2018. The demand for air cargo was initially driven by protective personal equipment and medications, followed by challenges in the ocean-shipping supply chain and a strong growth in e-commerce sales. Furthermore, capacity of air cargo fell with the number of grounded passenger planes, which belly cargo typically accounts for 54% of world air cargo capacity. Finally, the gap between supply and demand resulted in air cargo yields rising by 40% in 2020 and 15% in 2021. While cargo yields may drop over the next few years, they will remain above 2019 levels due to a continuing gap between supply and demand, as long as the global economy and world trade recover.

Due to the COVID –19 pandemic, passenger demand in 2021 remained 75.5% below 2019 levels [...] over USD 200 billion have been provided to airlines in 87 countries.

The prolonged impact of the COVID-19 pandemic continues to pose a serious challenge for many WBG client countries, which are facing continued economic hardship in many sectors of their economy. However, in many regions, connectivity by air remains key for economic development and social integration, as land or sea transportation is not suitable, especially over longer distances. This has encouraged some governments in developing countries to heavily support their national airlines, and in some cases, even create new state-owned airlines. This is somewhat understandable, given the strong support

by developed countries to their airlines and the fact that well over 90% of state aid went to carriers in developed countries. However, public finances in many developing and emerging states face many basic demands, such as health or education, which should be served as a priority, while investment needs in aviation can consume considerable funds. Participation of the private sector in aviation must therefore be supported and fostered to an even greater extent. However, given that there are currently many sectors that would welcome investors, the private sector may be more selective as aviation has traditionally represented a higher risk than other sectors.

Given this difficult backdrop, states in emerging and developing economies should strive to rebuild better air transportation sectors. This means that their aviation industry should hinge on a sustainable framework, which includes safety, security, the environment, affordability, and good governance in terms of adhering to international standards and principles. Only this will enable the sector to provide a positive economic and social impact by establishing and maintaining domestic, regional, and global connectivity.

The 17th edition of the World Bank Group (WBG) Air Transport Annual Report summarizes the current portfolio of activities being provided to support emerging and developing countries in the development of air transportation, highlighting some of the initiatives in greater detail. After several years of a slightly declining portfolio, which was primarily due to the fact that many client countries profited from a favorable investment climate for the private sector, the overall air transport portfolio increased by nearly 10% in FY21 to USD 934 million. The strongest increase of 12.8% to USD 561 million was achieved by IFC, which represents a strong case of increased private sector engagement in air transportation supported by the WBG. The portfolio of IDA increased by 6.14% to 329 million, while the exposure at IBRD remained the same.

The WBG will continue to support our clients in *rebuilding* their air transport sectors by responding with investment projects where warranted and by providing non-lending technical assistance, such as advisory services and efforts to facilitate the mobilization of private capital for air transport development.

We look forward to supporting our clients in 2022 in addressing their current development challenges.



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

ABBREVIATIONS

ACI	Airports Council International	MOIID	Ministry of Infrastructure Development, Public Utilities, Energy, Transportation and Implementation
ADS-B/C	Automatic Dependent Surveillance – Broadcast/Contract		
AF	Additional Financing		
AGL	Airfield Ground Lighting	MOTCA	Ministry of Tourism and Civil Aviation
AOC	Air Operator Certificate		
ARFF	Airfield Rescue and Fire Fighting	MPA	Multiphase Programmatic Approach
ATC	Air Traffic Control		
ATM	Air Traffic Management	MWTI	Ministry of Works, Transport and Infrastructure
AVSA	Aviation Solutions Area		
BOT	Build-Operate-Transfer	NCHM	Center for Hydrology and Meteorology
BOO	Build-Own-Operate	NDMA	National Disaster Management Authority
BOOT	Build-Own-Operate-Transfer	OFNAC	National Office of Civil Aviation
BTO	Build-Transfer-Operate	OHS	Occupational Health and Safety
CAA	Civil Aviation Authority	OPS	Flight Operations
CAD	Canadian Dollar	OROA	Ouadi Rime and Ouadi Achim Faunal Reserve
CAP	Corrective Action Plan		
CARs	Central Asia Regional Links Program	PA	Protected Areas
		PASO	Pacific Aviation Safety Office
CEM	Country Economic Memorandum	PAIP	Pacific Aviation Investment Program
CERC	Contingent Emergency Response Component	PDM	Pakistan Meteorological Department
		PDO	Project Development Objectives
CES	Charles E. Schlumberger, Lead Air Transport Specialist (WBG)	PIU	Project Implementation Unit
		PJIA	Princess Juliana International Airport
DDM	Department of Disaster Management	PJIAE	Princess Juliana International Airport Operating Company N.V.
		PPP	Public-Private Partnership
DRC	Democratic Republic of Congo	PRG	Pesticide Resource Group
GA	General Aviation		
GACA	General Authority of Civil Aviation	PwC	PricewaterhouseCoopers
GDP	Gross Domestic Product	QAIA	Queen Alia International Airport
GEF	Global Environmental Facility	QMS	Quality Management System
GIS	Geographic Information System	RAS	Reimbursable Advisory Service
GNSS	Global Navigation Satellite System	RESAs	Runway End Safety Areas
GPS	Global Positioning System	ROI	Register of Inspectors
EASA	European Aviation Safety Agency	RPA	Remotely Piloted Aircraft
EIP	European Investment Bank	RPK	Revenue Passenger Kilometer
ELRP	Emergency Locust response Program	RSOO	Regional Safety Oversight Organization
		SAA	Samoa Airport Authority
EUR	Euro	SAF	Sustainable Aviation Fuels
FY2021	Fiscal Year 2021 (01 July 2020 to 30 June 2021)	SARP	Standards and Recommended Practices
		SIACL	Solomon Islands Airport Corporation Limited
GLTFP	Great Lakes Trade Facilitation Project	SIRAP	Solomon Islands Roads and Aviation Project
IATA	International Air Transport Association	SMART	Spatial Monitoring and Reporting
		SOE	State Owned Enterprises
IBRD	International Bank for Reconstruction and Development	SSL	Safety and Security Levy
		STP	Sao Tome and Principe
ICAO	International Civil Aviation Organization (UN Agency)	TA	Technical Assistance
		TCRTP	Tonga Climate Resilient Transport Project
ICT	Information and Communication Technologies	TF	Trust Fund
		TP	Tender Package
IDA	International Development Association (WBG)	TSCP	Transport Sector Consolidation Project
		TSRP	Transport Sector Reform Project
IFC	International Finance Corporation	UAS	Unmanned Aircraft Systems
ILS	Instrument Landing System	UAT	Uzbekistan Airways Technics
KAI	Kyrgyz Aviation Institute	UHY	Uzbekistan Airways
KEP	Knowledge-Exchange Platform	UN	United Nations
LAIA	La Aurora International airport	USD	United States Dollar
LCC	Low Cost Carrier	USOAP	Universal Safety Oversight Audit Programme
MACE	Malta Aviation Conference & Expo		
MBIA	Maurice Bishop International Airport	VSAT	Very Small Aperture Terminal
		WB(G)	World Bank (Group)
MIGA	Multilateral Investment Guarantee Agency (WBG)	WEF	World Economic Forum
MMIA	Mundo Maya International Airport		

This report benefited from the contributions of a number of staff members from across the World Bank Group.

We would like to thank Ahsan Tehsin, Alexandre Leigh, Arati Belle, Christian Vang Eghoff, Cornelius Fleischhaker, Fabian Hinojosa, Kavita Sethi, Keren Charles, Malaika Becoulet, Maria Lopez Conde, Nicolas De Leon, Nana Soetantri, Noro-
arisoa Rabefaniraka, Papa Mamadou Fall, Satoshi Ogita, Shruti Vijayakumar, Susan Vasquez, Tatsuo Harada, Tojoarofenitra Ramanankirahina, and Vikram Cuttaree.

We would also like to thank Binyam Reja, Acting Director Transport for his continued guidance and support, as well as Sandy Belle Habchi for the research and preparation of this report.

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 USD1.25 a day to no more than 3%.
- ◆ Promote shared prosperity by boosting the income of the bottom 40% 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 digital development.

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 concessional 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 Digital Development 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 USD 48.2 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 2021 (FY2021), WBG's Air Transport Portfolio amounted to USD 934 million, an increase of 10 percent from FY2020. The Air Transport segment makes up around 2.84 percent of the WBG's USD 32.871 million Transport portfolio. The WBG's FY2021 Transport portfolio consisted of approximately 10 percent of the WBG's active portfolio of USD 331 million (excluding MIGA).

In FY2021, the Air Transport portfolio included a total of 28 lending and non-lending projects or project components through the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA), including active and completed projects. The International Finance Corporation (IFC)'s included 11 active operations in its Investment portfolio and supported 6 Advisory Mandates. MIGA provided two Guarantees for the Air Transport Sector.

One IBRD/IDA lending project implemented in Samoa closed in FY2021 with satisfactory outcomes. Key achievements include, (i) regulatory certification of safety and security at project airports, measured through compliance of the project's airport in accordance with ICAO standards, through infrastructure investments, capacity building and policy updates and (ii) modernization of air traffic management through two elements (a) Very Small Aperture Terminal (VSAT) to enable regional Civil Aviation Authorities and air transport organizations to communicate essential safety and security communications in a reliable, secure and timely manner, and (b) Automatic Dependent Surveillance Broadcast (ADS-B) to enhance safety by making aircraft visible, in real time, to air traffic control and other appropriately equipped ADS-B aircraft. Further accomplishments include: (i) the supply and installation of Navigational Aids, Airfield Ground Lighting (AGL), and Power Systems and Air Traffic Control Equipment (ATC), (ii) two refurbished fire rescue vehicles being commissioned, (iii) Faleolo Airport complies as an Airfield Rescue and Fire Fighting (ARFF) Category 10 airport, (iv) installation of Safety screening equipment, (v) the rehabilitation of airport runways, taxiways, and aprons, (vi) the development of an Aviation Sector Strategy for Samoa, and (vii) a Master Plan and business Strategy for Samoa Airport Authority (SAA).

It is also worthwhile to highlight that under the second aviation Reimbursable Advisory Services in Central Asia, which will assist Uzbekistan in the implementation of the ongoing aviation sector restructuring, three virtual missions have been conducted with promising outcomes. Also in FY2021, (i) a new project was put forward for approval with regards Transport and Connectivity Support in the DRC, (ii) an operation was proposed in Sao Tome and Principe as a second operation in a programmatic series of three COVID-19 Human and Economic Response, Recovery and Resilience Development Policy Financings, (iii) a new project in Samoa is in the works, and (iv) the World Bank approved a second Tonga Climate Resilient Project.

Major active projects financed by the International Finance Corporation (IFC) include Sofia Airport in Bulgaria, Queen Alia Airport in Jordan, the Zagreb Airport in Croatia, the Enfidha Airport construction in Tunisia, and Belgrade Airport in Serbia. In addition, the IFC investment portfolio also includes Lima Airport in Peru and the 14 Regional Airports in Greece.

In addition, the IFC is active through the provision of Advisory Services for Kingston Airport (Jamaica), the Saudi Airports (26 in total), Sofia Airport (Bulgaria), Podgorica and Tivat (Montenegro), Beirut Airport (Lebanon) and Clark Airport (Philippines).

MIGA has been involved in the air transport sector in the past through the issuance of guarantees for two airport projects in Jordan and Madagascar .

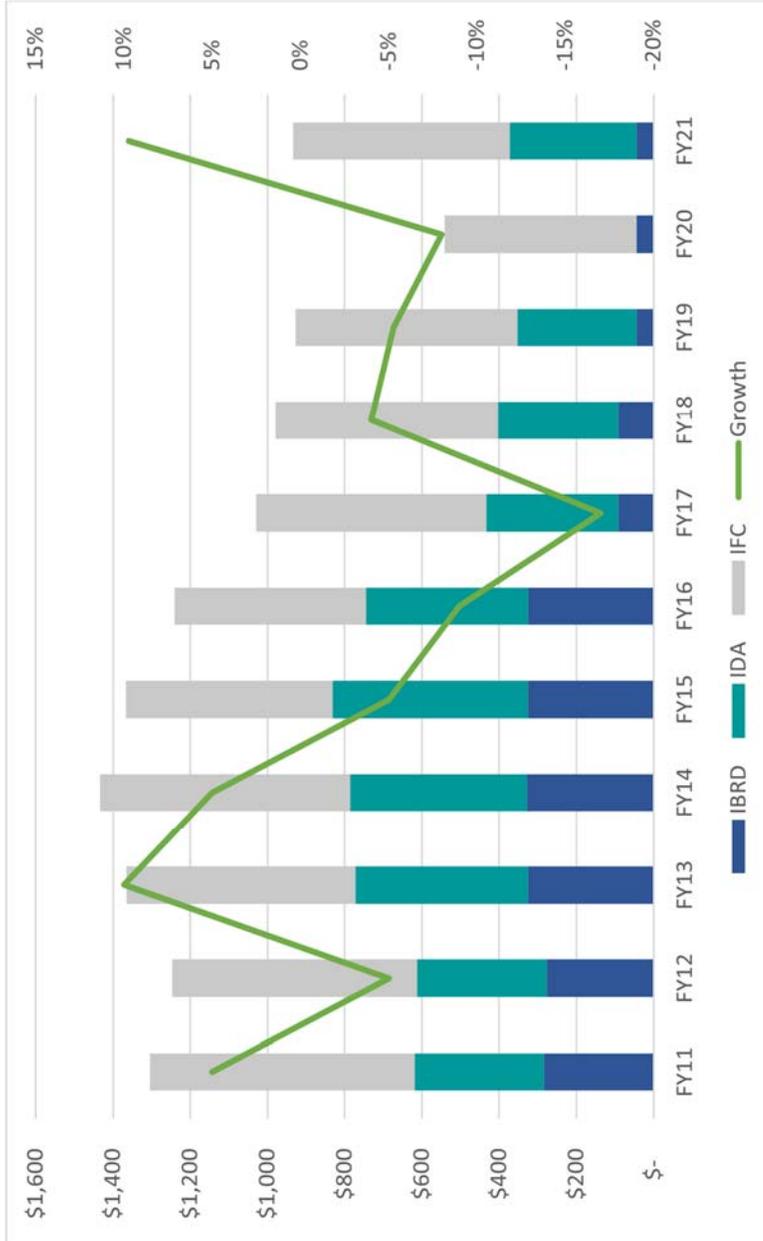
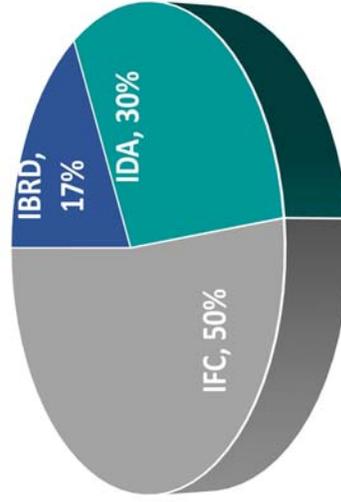
Research and External Relations

World Bank staff members continue to represent the organization externally at various air transport conferences and events, notably the Second Malta Aviation Conference & Expo (MACE) held virtually in November 2020, and the High-Level Ministerial Meeting on Enhancing Air Transport Connectivity and Growth in West Africa held virtually 17-18 March 2021 by the Federal Ministry of Aviation, Nigeria in cooperation with the International Partners for Aviation Development, Innovations and Sustainability (iPADIS). 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

USD934M

**FY21 WBG AIR TRANSPORT
PORTFOLIO**



TEN YEAR TREND - AIR TRANSPORT PORTFOLIO

	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21
IBRD	\$ 285	\$ 277	\$ 325	\$ 329	\$ 325	\$ 325	\$ 92	\$ 92	\$ 44	\$ 44	\$ 44
IDA	\$ 334	\$ 336	\$ 447	\$ 457	\$ 507	\$ 420	\$ 341	\$ 311	\$ 309	\$ 310	\$ 329
IFC	\$ 686	\$ 633	\$ 593	\$ 647	\$ 535	\$ 496	\$ 596	\$ 576	\$ 575	\$ 497	\$ 561
Growth	5%	-5%	10%	5%	-5%	-9%	-17%	-4%	-5%	-8%	10%
Total	\$ 1,305	\$ 1,246	\$ 1,365	\$ 1,433	\$ 1,367	\$ 1,241	\$ 1,029	\$ 979	\$ 928	\$ 851	\$ 934

The WBG is a vital source of financial and technical assistance to developing countries through low-interest loans, credits, and grants. In Fiscal Year 2020, the World Bank's Air Transport Portfolio was around USD 851 million. This included a total of 31 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 Investment portfolio. In addition, IFC is supporting 28 Advisory Mandates and MIGA is providing 3 Guarantees for the Air Transport Sector.

Active Portfolio	IBRD			IDA			IFC			TOTAL		
	FY21	FY20	Change	FY21	FY20	Change	FY21	FY20	Change	FY21	FY20	Change
WB Group Total Active Portfolio <i>(in millions USD)</i>	133,984	133,679	0.23%	132,813	136,856	-2.95%	64,092	58,650	9.28%	330,889	329,185	0.52%
WB Group Active Portfolio-Transport	16,325	23,593	-30.81%	14,644	13,873	5.56%	1,902	2,026	-6.12%	32,871	39,492	-16.77%
Transport % of Total Active Portfolio	12.18%	17.65%	-5.47 pp	11.03%	10.14%	0.89 pp	2.97%	3.45%	-0.49 pp	9.93%	12.00%	-2.07 pp
Air Transport Active Projects	44.16	44.16	0.00%	328.73	309.72	6.14%	560.81	497.15	12.80%	933.70	851.03	9.71%
% of Total Active Portfolio	0.03%	0.03%	-0.01 pp	0.25%	0.23%	0.03 pp	0.88%	0.85%	0.04 pp	0.28%	0.26%	0.03 pp
% of Total Transport Portfolio	0.27%	0.19%	0.09 pp	2.24%	2.23%	0.02 pp	24.49%	24.54%	-0.05 pp	2.84%	2.15%	0.69 pp

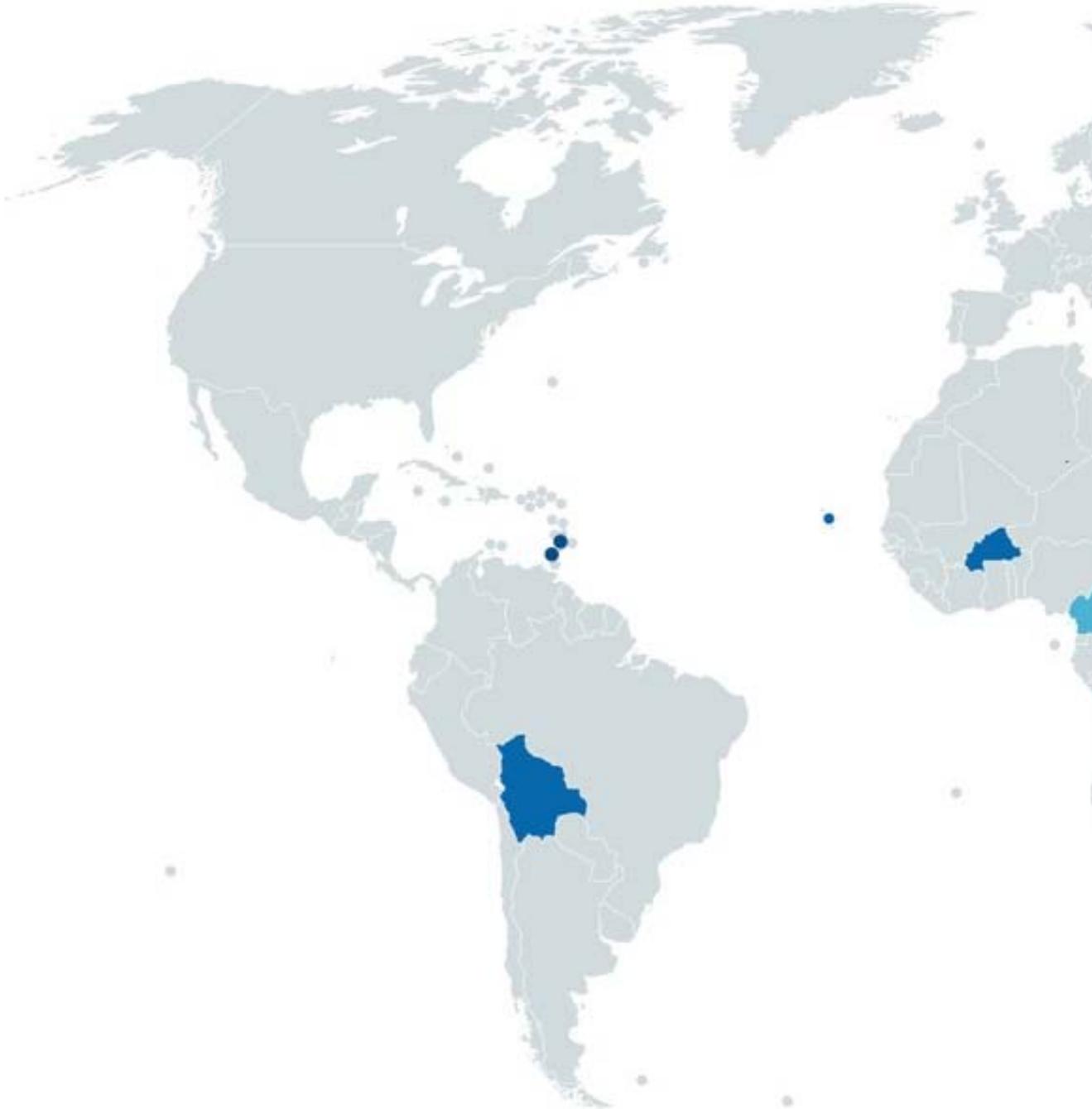
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Note: Excluding the Multilateral Investment Guarantee Agency (MIGA)

For IFC, outstanding balances across all product categories (loans, quasi loans, equity at acquisition cost, quasi-equity, risk management and guarantees)

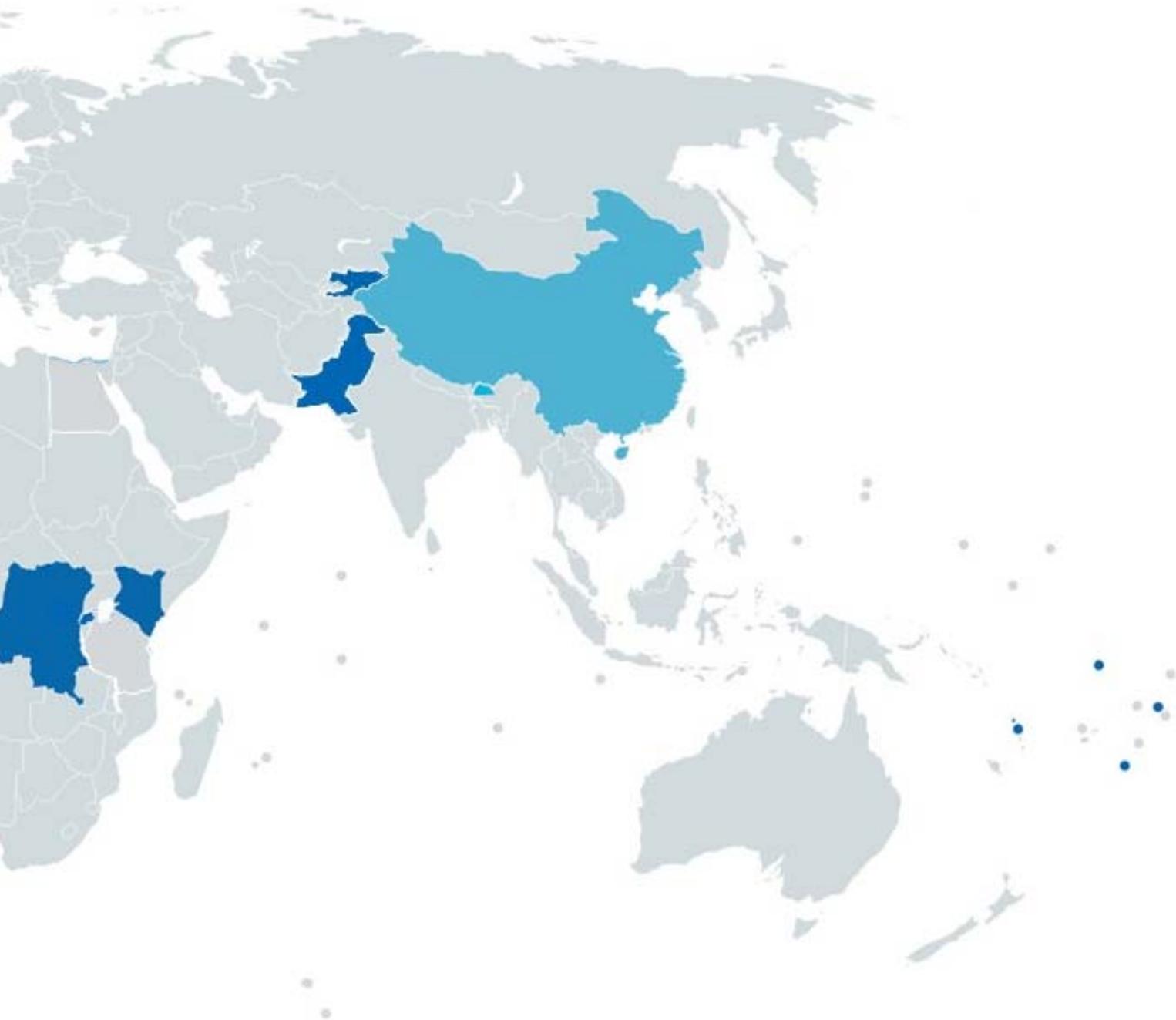
IBRD & IDA PRO-

Active Air Transport Projects in FY19: 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 (Lending)

- IBRD
- IDA



IBRD AND IDA LENDING PROJECTS

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD M)	Aviation Component		
Africa	Cabo Verde	P126516	Cabo Verde - Transport Sector Reform	Institutional capacity building, technical assistance, and support of national airline.	58.0	6.92	IDA Credit	Active
Africa	Cameroon	P150999	CMR Transport Sector Development Project	To improve safety and security at Cameroon's four international airports.	206.7	48.7	IBRD	Active
Africa	Chad	P171611	Chad Local Development and Adaptation Project	To support the improved management of OROA as well as support national efforts to fight against poaching and promote conservation of biodiversity in line with Chad's engagement in the GEF-7 Global Wildlife Program.	54.5	13	IDA Grant	Active
Africa	Democratic Republic of Congo	P153085	DRC-Goma Airport Project	Improve the safety, security, and operations of Goma International Airport through infra-structure investments and capacity building.	52.0	45.24	IDA Grant	Active
Africa	Democratic Republic of Congo	P159217	DRC Hydromet	Institutional and regulatory strengthening, capacity building and implementation support, as well as modernization of equipment, facilities and infrastructure for basic observation and meteorological forecasting.	8.0	0.87	IBRD	Active

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commit-		Type	Status as of End of FY2021
					Total (USD (M))	Aviation Component		
Africa	Democratic Republic of São Tomé and Príncipe	P174274	Second STP COVID-19 Recovery and Resilience Development Policy Operation	The program supports the Ministry of Infrastructure's Directive (no. 9/2021) to overhaul STP's aviation security program (PNSAC). The Directive directs relevant government agencies (INAC and ENASA) to revise the aviation security program in order to bring it in line with EU cargo export requirements. The policy reforms envisioned in the third DPO3 trigger aim to bring STP's airport security regulations up to EU standards by defining the necessary security procedures as well as auditing requirements by STP's aviation security oversight body.	12	1.0	IDA Grant	Active
					160.0	72.37	IDA Grant & IDA Credit	Active
Africa	Rwanda	P151083	Great Lakes Trade Facilitation Project	Rehabilitation of Kamembe International Airport by Lake Kivu in Southwestern Rwanda.	79	14.2	IDA Credit	Active

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD M)	Aviation Component		
East Asia Pacific	Pacific Islands	P145057	Pacific Aviation Safety Office Reform	Strengthen the Pacific Aviation Safety Office's technical and coordination capacity.	6.7	1.93	IDA Grant	Active
					41.6	38.3	IDA Grant	Closed
East Asia Pacific	Samoa	P143408	Samoa Aviation Investment Project	Improve operational safety and oversight.	66.0	29	IDA Grant	Active
East Asia Pacific	Solomon Islands	P166622	Samoa Aviation and Roads Investment Project Solomon Islands Roads and Aviation Project	To support investments to improve the climate resilience and safety of aviation in Samoa. Honiara and Munda Airports Infrastructure Investments to improve operational safety and overall infrastructure resilience to climate change at Honiara, enable Munda to receive international flights with an enhanced resilience to climatic disasters, and UXO surveys. It will also provide institutional strengthening to the aviation sector and prepare for Auki Gwaunaru'u Airport Infrastructure Investments.	51.0	35.39	IDA Credit & IDA Grant	Active

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD M)	Aviation Component		
East Asia Pacific	Tonga	P161539	Tonga Climate Resilient Transport Project	Support the aviation sector infrastructure rehabilitation.	26.0	2.0	IDA Grant	Active
					38.0	8.35	IDA Grant	Active
East Asia Pacific	Tuvalu	P128940	Tuvalu Pacific Aviation Investment	Infrastructure investment, sector reform and training.	35.7	25.7	IDA Grant	Active
Europe & Central Asia	Kyrgyz Republic	P159220	Central Asia Regional Links Program - Phase 3	Strengthening of the aviation sector's safety and service provision. Addressing aviation safety and service provision would help the Civil Aviation Agency (CAA) to reach ICAO's international safety standards and recommended practices, as well as to overcome the current blacklist of Kyrgyz carriers by the EU, enhance local carriers' growth opportunities and ultimately increase the country's level of connectivity, a result that would benefit both local residents and international visitors.	55	4.5	IDA Grant & IDA Credit	Active

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD M)	Aviation Component		
Latin America & the Caribbean	Bolivia	P122007	BO National Roads & Airport Infrastructure	Infrastructure development; improve safety, security and operational reliability of the Rurrenabaque Airport	109.5	5.48	IDA Credit	Active
Latin America & the Caribbean	Dominica	P171224	Dominica - Caribbean Regional Air Transport Connectivity Project	To enhance the safety and resilience of Dominica's existing two airports, support Dominica's efforts to comply with ICAO SARPs and abide by the POS Declaration, and support Dominica's air transport sector through regional and Dominica-specific technical assistance.	13.0	12	IDA Credit	Active
Latin America & the Caribbean	Eastern Caribbean and Sub-Region	P117871	60 Regional Disaster Vulnerability Reduction Projects	Regional Platforms for Hazard and Risk Evaluation, and Applications for Improved Decision Making.	20.9	5.01	IDA Credit	Active
Latin America & the Caribbean	Grenada	P172951	Grenada - Caribbean Regional Air Transport Connectivity	To improve MBIA operational safety and resilience as well as support Grenada's efforts to comply with ICAO's SARP and abide by the POS Declaration. The project also aims to strengthen the institutional capacity of GAA and Civil Aviation Division through a combination of regional and Grenada-specific technical assistance and capacity building activities with a focus on enhancing aircraft operational safety, air transport sector regulatory oversight, airport management capability, climate/disaster resilience, and gender diversity in the workplace.	17.0	15	IDA Credit	Active

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD M)	Aviation Component		
Latin America & the Caribbean	Haiti	P170907	Caribbean Regional Air Transport Connectivity Project - Haiti	To improve operational safety and navigation efficiency of air transport in the Recipient's territory and increase the climate and disaster resilience of associated infrastructure at the Recipient's international airports.	84.0	84	IDA Grant	Active
			Saint Lucia - Caribbean Regional Air Transport Connectivity Project	To improve operational safety and navigation efficiency of air transport, and enhance resilience of Saint Lucia's airport infrastructure to natural disasters.	45.0	41	IDA Credit	Active
			Sint Maarten Airport Terminal Reconstruction Project	The development objective to restore the passenger capacity of Princess Juliana International Airport to pre-Hurricane Irma levels with improved resilience towards hurricanes.	72.0	72	IDA Grant	Active
South Asia	Bhutan	P154477	Hydromet Services and Disaster Resilience Regional Project	The financing of aviation meteorology equipment, hardware and software to enhance aviation safety at Paro International Airport.	3.8	0.8	IBRD	Active
			Pakistan Hydromet & DRM Services Project	Upgrading of the monitoring and forecasting system at airports to improve aviation services, and the installation of an Aircraft Meteorological Data Relay system at 10 international airports.	188.0	11.28	IDA Grant	Active

IBRD AND IDA PIPELINE PROJECTS

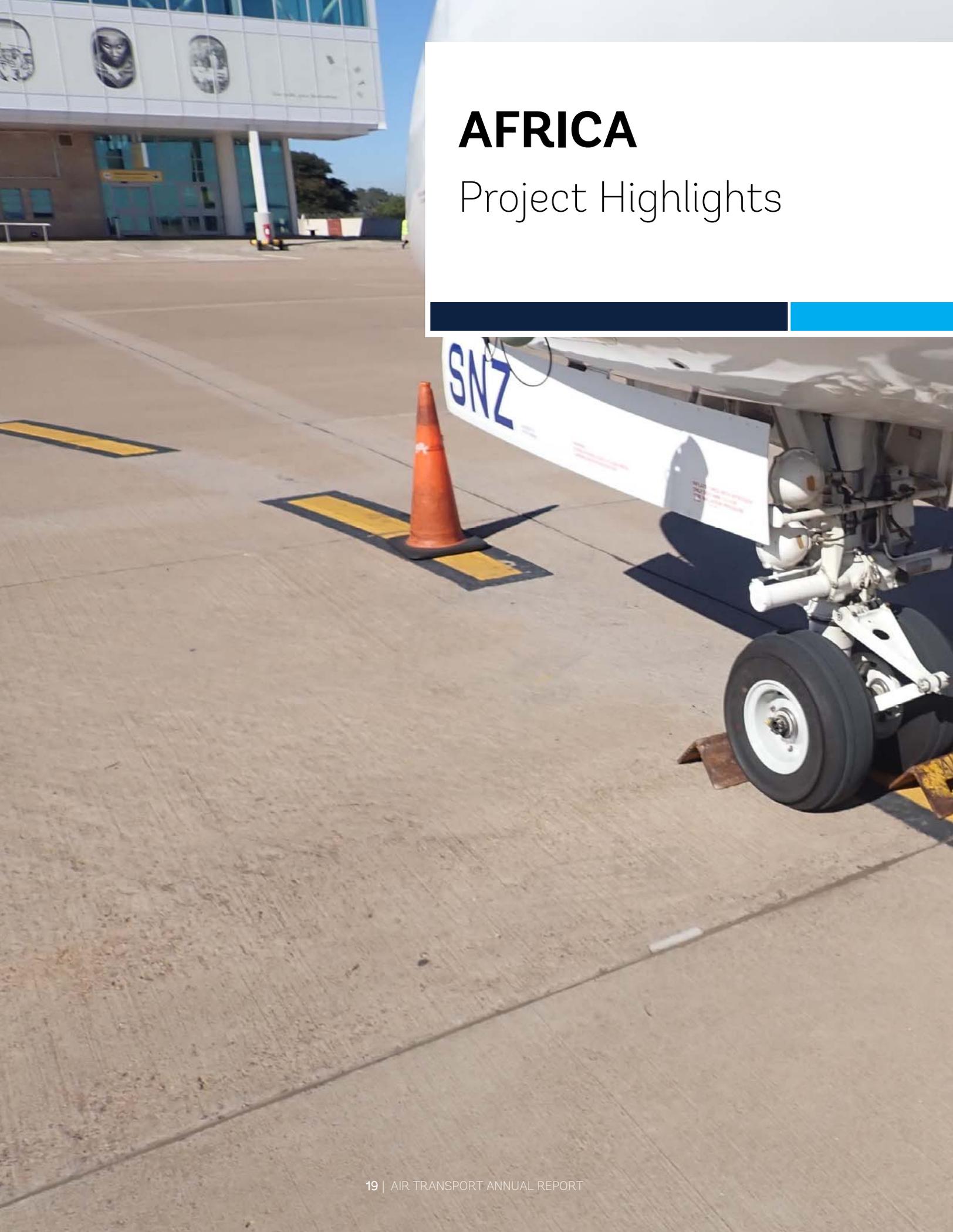
Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD)	Aviation Compo-		
Africa	Democratic Republic of Congo	P161877	DRC Transport and Connectivity Support Project	To improve the governance, climate resilience, and private financing attractiveness of the aviation sector. The project will also finance drainage development for DRC's primary international gateway airport, Goma Airport, and its surrounding informal urban settlements in response to existing and increasing flooding risks from climate change.	500	36	IDA Credit & IDA Grant	Pipeline FY2022
Africa	Tanzania	P165660	Transport Integration Project	To finance the rehabilitation and upgrading of three priority regional airports that are exposed and vulnerable to climate change impacts, out of the eleven airports identified for upgrading under the TSSP. The interventions include addressing asset damage caused by climatic events and the further enhancement of climate resilience, energy efficiency, and safety of the airports. The capacity of the airports will also be enhanced to be able to address the demand projected for the medium to long terms, in climate resilient airports that offer international standards of safety. It will also support (i) air navigation facilities, (ii) meteorological facilities, (iii) the associated construction supervision consultants, and (iv) land acquisition, and resettlement and rehabilitation.	550	86.53	IDA Credit	Pipeline FY2022

IBRD AND IDA PIPELINE PROJECTS

Region	Country	Project Code	Project Name	Description of Aviation Component (s)	WBG Commitment (USD M)		Type	Status as of End of FY2021
					Total (USD M)	Aviation Component		
Africa	Kenya	P167734	Kenya Aviation Systems Improvement Project	Improvement of aviation safety, security and strengthening of air transport institutions. This will be achieved through the installation of an integrated security systems at major airports; automation of regulatory functions at KCAA; installation of air navigation system; construction of an air accident investigation workshop at JKIA and strengthening the capacity of KCAA, KAA and the State Department of Transport.	100.0	100	IDA	Pipeline FY2022

AFRICA

Project Highlights



CABO VERDE

Cabo Verde Transport Sector Reform Project (P126516)

In FY2013, the World Bank approved a USD 19 million International Development Association (IDA) Credit for the Cabo Verde Transport Sector Reform Project (TSRP), as well as a USD 27 million IDA Credit Additional Financing (AF) in FY2017. The Project Development Objective (PDO) is to improve the efficiency and management of national road infrastructure, as well as to lay the groundwork for transport sector State Owned Enterprise (SOE) reform. The project's fourth component (*Inter-Island Transport Strategy*) aims to improve the quality of inter-island sea and air transport services, as well as port and airport management and the efficiency of transport SOEs. The project is expected to close in June 2022, following an extension of the closing date.

With the extension of the project's closing date, the government took advantage of the opportunity to reprioritize technical assistance activities in the aviation sector and prioritize those they believed would have a direct and immediate impact on the sector and aid in the post-COVID recovery. These include the assessment of the civil aviation legal and regulatory framework, support to improve the statistical center within the Civil Aviation Authority, and the development of a training plan for the civil aviation sector.

It should be noted that the government still intends to privatize Airports and Air Safety (ASA) through a concession, although the process is delayed. The privatization processes of ASA and CV Handling are being managed by a working group led by the Secretary of State for Finance. The World Bank's SOE Project funds advisory services to the government.

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CAMEROON

CMR Transport Sector Development Project (P150999)

The World Bank approved a USD 192 million loan for the Cameroon Transport Sector Development Project in FY2016. The Project Development Objective is (i) to strengthen transport planning, (ii) improve

transport efficiency and safety on the Babadjou-Bamenda section of the Yaoundé-Bamenda transport corridor (about 364 km), and (iii) enhance safety and security at selected airports.

The project has four components: (i) *Transport Planning and Capacity Building*, (ii) *Road Transport Efficiency Improvements*, (iii) *Air Transport Safety and Security Improvement*, and (iv) *Support to Project Implementation Management and Monitoring*. The third component is primarily concerned with facilitating the International Civil Aviation Organization's (ICAO) effective implementation rating of Aerodrome and Ground Assistance at project airports (Yaoundé, Douala, Garoua, and Maroua), as well as the International Civil Aviation Organization (ICAO) rating of Cameroon's security oversight system. It has three subcomponents: (i) strengthening airport safety and security infrastructure, (ii) strengthening air transport safety and security oversight, and (iii) strengthening air transport planning capacity.

As of FY2021, the aviation component is on track to meet its goals for air safety and security: (i) the Nsimalen Airport bypass road has been completed, (ii) the Yaoundé Emergency Operations Center (CDOU) has also been complete, (iii) the CDOUs of Maroua and Garoua have made significant progress despite COVID-19 constraints, and (iv) the same is true for the works of the patrol road and the security wall of the Nsimalen Airport. The Cameroon Civil Aviation Authority (CCAA) has included the construction of the Yaoundé-Nsimalen airport security wall in the project in order to consolidate and scale up the impacts of the air component on the Nsimalen airport platform. Certain technical assistance activities in safety and security that were originally planned for the project have been funded by the CCAA from its own budget. The project's closing date has been extended to 30 June 2024 to enable completion of all activities including the activities of the air component.

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CHAD

Albia - Chad Local Development and Adaption Project (P171611)

The World Bank approved a USD 50 million IDA Grant and a USD 4.45 million Global Environmental Facility (GEF) Trust Fund in FY2020 for the Albia -

Chad Local Development and Adaption Project. The Project Development Objective of the project is to improve the management of natural resources and the livelihoods of populations in selected climate vulnerable areas in and around the Ouadi Rime and Ouadi Achim (OROA) reserves in Chad. The project has four components: (i) *Sustainable Natural Resources Management and Protected Areas*, (ii) *Promoting Diversified, Resilient, Sustainable Livelihoods*, (iii) *Project Management, Coordination, and Monitoring* and (iv) *Contingency Emergency Response Com-*



ponent.

The first component aims to support the improved management of OROA as well as support national efforts to fight against poaching and promote conservation of biodiversity in line with the country's engagement in the GEF-7 Global Wildlife Program. Main activities include developing basic infrastructure and strengthening capacity, management as well as regional dialogue to protect biodiversity and ecosystem services. Under this component, the Project also supports community participation in sustainable natural resource management, including the establishment of local community management committees to create the minimal necessary conditions to sustainably manage natural resources and their fair access. Main activities include citizen engagement, capacity building, participatory processes for use of natural resources as well as inclusive local development.

Subcomponent 1.1 - *Improved Management of Protected Areas (PA)* aims to support biodiversity conservation and strengthen the capacity of key conservation institutions. It will combine activities centered on the OROA as well as activities at national level.

The subcomponent will support the management of the OROA Reserve for enhanced monitoring of wild-life, enforcement of protection, and fire control and prevention, as well as for raising the Reserve's profile and maximizing economic opportunities. Activities, which will contribute to the implementation of the Reserve's upcoming management plan (currently under development, with finalization expected in 2020), include the purchase of equipment to facilitate transport and communication throughout the Reserve's territory, including vehicles, a small plane (4-6 seats), Information and Communication Technologies (ICT) equipment (e.g., Global Positioning System (GPS) and Geographic Information System (GIS) software, solar chargers, binoculars, camera, cyber-tracker/Spatial Monitoring and Reporting (SMART) tablets, walkie-talkies, for all patrols, Good Very High Frequency radio network for office areas, vehicles, aircraft), and disruptive technology for monitoring animal populations (e.g., drones for vultures, support for innovation in gazelle GPS collars, satellite tracking, etc.).

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DEMOCRATIC REPUBLIC OF CONGO

Goma Airport Safety Improvement Project (P153085)

The World Bank approved a USD 52 million IDA Grant in FY2015 to help improve the safety, security, and operations of Goma International Airport, the main international gateway of the Eastern Democratic Republic of Congo (DRC), and to repair damaged infrastructure. The eruption of Mount Nyiragongo in 2002 caused significant damage to the airport's sole runway and taxiway and meant a significant risk to the peace consolidation efforts in the region.

The project was organized by two components: (i) *Airport Infrastructure Investments*, and (ii) *Capacity Building and Project Implementation Support*. The first component was aimed at investments necessary to urgently enable the airport to meet international safety and security standards, and to bring its capacity back to the level proper to the volcanic eruption. The second component's objectives were to support the institutional development of Goma airport, share lessons learned with other key airports in the DRC,



and mitigate the risks associated with the volcanic activities in the area. It is also intended to promote interventions to provide social dividends to surrounding communities in this conflict-affected area, and ensure proper project implementation.

At project closure in October 2021, the project objectives had been substantially achieved. Today, the airport is operational at its original capacity, and operations at the airport have significantly improved. The most significant safety and security improvements include:

- (i) Repair of the runway. The project removed the remaining lava rocks at the northern end of the runway and reconstructed the runway at its original length.
- (ii) Improving safety at the runway. Two runway end safety areas were constructed to reduce the risk of damage to an aircraft, improve aircraft deceleration, and facilitate the movement of rescue and firefighting vehicles.
- (iii) Safe and adequate air traffic control. The brand new control tower has been operational since 30 November and its equipment is up-to-date.
- (iv) Securing the airport by enclosure. The construction of the fence surrounding the airport ensures the protection of restricted areas and the runway

strip. The wall made it possible to delimit the airport area, and access is now controlled.

- (v) Securing the electricity supply. The project invested in a new building and new and modern equipment. Currently, the electricity is provided 24/7 and the electricity for the new control tower is supplied from the airport power plant.
- (vi) Improving the capacity of intervention of the service of rescue and firefighting services. The rescue and firefighting services were equipped with tools, parts, supplies, and a four-wheel drive vehicle to enhance their capacity for intervention and to improve the safety of the airport.
- (vii) Improving the drainage network inside the airport. The construction of drainage pipes contributed to the removal of rainwater from the airport premises to Lake Kivu.

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DEMOCRATIC REPUBLIC OF CONGO
Strengthening Hydro-Meteorological and Climate Services (P159217)

The Bank approved a USD 8 million IBRD loan for a Global Environment Project for the Democratic Re-

public of the Congo (DRC) in FY2017, with the goal of improving and strengthening the country's hydro-meteorological and climate services. Understanding hydro-meteorological and climate risks would aid in assessing social and economic impacts and developing appropriate policy responses to support the country's long-term development. More accurate, relevant, and timely hydro-meteorological information, warnings, and services could benefit a number of economic sectors in the DRC, including airfreight and aviation.

The project has four components: (i) *Institutional and Regulatory Strengthening*, (ii) *Modernization of Equipment, Facilities and Infrastructure for Basic Observation and Forecasting*, (iii) *Improvement of Hydromet Information Service Delivery*, and (iv) *Project Management*. The first component invests in the human and institutional resources needed to implement and sustain hydromet observation and forecasting, including conducting an institutional diagnosis that includes a comparative review of the roles and mandates of the various government agencies involved, such as Regies des Voies Aeriennes S.A. (RVA) and the National Agency for Meteorology and Remote Sensing (MettleSat), to help identify the main actions needed to increase efficiency. The second component assists in the reinforcement and rebuilding of basic observation and forecasting networks, as well as infrastructure required for MettleSat service provision.

Following a COVID-19 related setback, the project implementation is largely back on track as of FY2021. The implementation of a Quality Management System (QMS) is on track, and expected to raise standards and quality control/verification procedures across civil aviation institutions. Although the entire QMS certification process was scheduled to be complete by December 2021, there are ongoing issues and conversations related to the revenue sharing between the civil aviation authority and MettleSat with regards releasing funds in return to services provided by MettleSat to the civil aviation authority. A Memorandum of Understanding has been signed between MettleSat and the civil aviation authority and a national framework of meteorological services has been established. The project is also supporting (i) the drafting of the Meteorological Law which is expected to be accomplished by June 2022, and (ii) the installation of hydromet stations at 12 airports in the

DRC. The latter program is ongoing and it is expected that all airports will have synoptic stations by 16 June 2022. All of the stations and software were delivered to MettleSat in Kinshasa as part of the acquisition of meteorological and hydrological equipment and the flood Early Warning System is set to go live in March 2022.

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DEMOCRATIC REPUBLIC OF CONGO

DRC Transport and Connectivity Support Project (P161877)

The World Bank approved a USD 750 million IBRD/IDA financing for the Transport and Connectivity Support Project for the Democratic Republic of Congo (DRC) on 31 May 2022. The Project Development Objective (PDO) is to provide resilient, safe, and sustainable connectivity to and within selected geographic areas in the Eastern and Kasai regions of the DRC. The PDO will be achieved via three components: (i) *Sectoral Governance for Improved Connectivity*, (ii) *Roads Connectivity Improvement*, and (iii) *Environment and Social Measures*.

The first component will seek to improve the governance of the road, digital, and aviation sectors. Subcomponent 1.2 - *Technical Assistance to Aviation Sector Governance* will seek to improve the governance, the climate-resilience, and private financing attractiveness of the aviation sector. It will finance the following activities: (i) developing external and independent financial and organizational audits of the Airport Authority (RVA) and the Civil Aviation Authority (AAC), and support in the implementation of a time-bound corrective action plan following these audits, (ii) conducting a climate vulnerability assessment for key airports in the DRC, and preparing a prioritized work plan to address identified vulnerabilities, (iii) preparing of a short-term sustainable strategy for private sector participation in airport investments and the identification of opportunities for financially sustainable PPP in the aviation sector, and (iv) technical assistance to AAC to reinforce their regulatory function.

The second component will finance selected physical (road and air) and digital connectivity infrastructure. Subcomponent 2.2 - *Aviation Infrastructure Improvement* will finance drainage development for DRC's

primary international gateway airport, Goma Airport, and its surrounding informal urban settlements in response to existing and increasing flooding risks from climate change. It will also finance the remaining construction work of a new control tower at Goma Airport from the previous Goma Airport Safety Improvement Project (P153085). It might also finance some additional infrastructure measures to enhance the climate resilience of other key airports in the Eastern and Kasai regions of the DRC.

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DEMOCRATIC REPUBLIC OF SAO TOME AND PRINCEPE

Second COVID-19 Recovery and Resilience Development Policy Financing Project (P174274)

By the end of FY2021, an operation was proposed in Sao Tome and Principe (STP) as the second operation in a programmatic series of three COVID-19 Human and Economic Response, Recovery and Resilience Development Policy Financings (DPFs). The series' objective is to assist the Government of STP (GoSTP)

in responding to the human and economic impact of the COVID-19 pandemic, as well as to support economy-wide and sectoral reforms for a stronger and longer-lasting recovery. Following a first DPF focused on STP response to the pandemic, this proposed second DPF of USD 12 million supports both crisis response and key structural reforms that underpin inclusive growth and poverty reduction.

The GoSTP has taken steps to ensure the safe reopening of the tourism industry as well as opportunities in other promising sectors such as high-value-added agricultural and fishing exports (e.g., cocoa, coffee, vanilla and seafood). To that end, the Ministry of Tourism, Culture, Industry, and Trade established a public-private commission to develop COVID-19 health and hygiene guidelines and protocols for tourism operators, which have been formalized in the "clean and safe" seal. The program also supports the Ministry of Infrastructure's Directive (no. 9/2021) to overhaul STP's aviation security program (PNSAC). The Directive directs relevant government agencies (INAC and ENASA) to revise the aviation security program in order to bring it in line with EU cargo export requirements. The policy reforms envisioned in the third Development Policy Operations (DPO3) trigger aim to bring STP's airport security regulations up to EU standards by defining the necessary security procedures





(e.g., cargo screening) as well as auditing requirements by STP's aviation security oversight body. The program covers airport security rules and procedures, as well as the requirements for National Civil Aviation Safety Training. These define not only competencies, but also the requirements that oversight auditors must meet and are subject to in order to carry out their safety oversight responsibilities (e.g., background checks, competence). Although not sufficient, these regulatory actions are required in order to achieve the ultimate goal of air cargo (ACC3) certification. The World Bank hence provides technical assistance to the government in revising these aviation security regulations.

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EASTERN AND SOUTHERN AFRICA Emergency Locust Response Program (P173702)

The Emergency Locust Response Program (ELRP) received USD 160 million in IDA funding on 20 May 2020. The Project Development Objective is to respond to the threat posed by the locust outbreak and to strengthen systems for preparedness in the Republic of Djibouti, the Federal Democratic Republic of Ethiopia, the Republic of Uganda, and the Republic of Kenya. The program has four components: (i) *Surveillance and Control Measures*, (ii) *Livelihoods Protection and Rehabilitation*, (iii) *Coordination and Early Warning Preparedness*, and (iv) *Project Management*. The components apply to each project phase under the program.

The Program objectives will be achieved by supporting investments across three pillars that form the technical

components of the ELRP Multiphase Programmatic Approach (MPA):

- Monitoring and controlling locust population growth and curbing the spread of swarms while mitigating the risks associated with control measures;
- Protecting and rehabilitating locust-affected households' livelihood in order to prevent human capital and asset loss, ensure food security, and return them to productivity; and
- Preventing future locust upsurges by strengthening capacity for *ex ante* surveillance and control operations to facilitate national and regional early warning systems.

In Djibouti, the first component would support the Republic of Djibouti in strengthening its regulatory framework and institutional capacity for the management of climate change-induced Desert Locust crises and setting up a sound legal basis for the management of pesticides used in Desert Locust control activities. The objective of subcomponent 1.2 - *Support for Control Measures*, consists of developing the public sector and community capacity to control desert locust populations and to prevent their spread into new areas. Under this subcomponent, the project will (i) procure the necessary ground equipment, (ii) procure a small agriculture single-seat and single-engine sprayer aircraft designed for pesticide application during aerial control operations with the associated service package for its operation, training, and maintenance, (iii) finance the operating costs associated with ground and aerial control operations, (iv) procure ULV formulations of bio pesticides, (v) set-up of a harmonized registration system with the desert locust-affected neighboring countries, and (vi) organize the appropriate training on maintenance of ULV sprayers and pesticide stock

management, taking into account FAO Directives and PRG recommendations and FAO guidelines on Good Practice for Aerial Application of Pesticides. All procured equipment, including the small agriculture single-seat and single-engine sprayer aircraft, will remain under government ownership, which will ensure the availability of the equipment when it is needed.

The Ethiopia project will adopt a two pronged approach for locust monitoring and control under the first component: (i) direct support to improving surveillance and assessment of locusts' situation, habitat conditions, and geographic exposure as well as targeted aerial and ground spraying, and (ii) capacity building for relevant national institutions and communities prone to climate change-induced locust breeding and infestation. Under subcomponent 1.1 - *Continuous Surveillance*, the project will finance procurement of equipment and operational costs to deploy expert teams and drones for the collection of data at strategic locations, reporting occurrences and possible occurrences of outbreaks, and assessing geographic exposure to locusts. Under subcomponent 1.2 - *Control Measures*, activities will focus on effective climate-smart locust management practices and include procurement and/or rental of equipment (sprayers, vehicles, drones, aircraft) and support to field operations (aerial and ground operations).

Kenya's first component of the project aims to limit the growth of existing climate-change-induced Desert Locust populations and curb their spread, while mitigating the risks associated with control measures and their impacts on human health and the environment. Subcomponent 1 - *Continuous Surveillance* will finance the surveillance activities, including both aerial and ground surveillance. Subcomponent 2 - *Control Measures* will reduce locust populations and prevent their spread to new areas through a range of targeted ground and aerial control operations. This subcomponent would finance the spraying equipment, protective gear, approved pesticides, and safety and awareness training for spraying teams and other locust control personnel.

The first component of the Uganda project has four sub-components that support pest surveillance for informed decision making, mounting and conduct of the desert locust. The first component of the Uganda project has four sub-components what support pest surveillance for informed decision making, mounting and conduct of control activities, early warning systems and risk reduction and management investments. Key investments under subcomponent 1.1 - *Pest Surveillance* include the procurement of necessary equipment for migratory pest

detection, surveillance including heavy duty drones, GIS/Remote sensing consultancy services, vehicles to support field surveillance, reporting and mapping Desert Locust spread, and provision of regular technical support to district. As with the other projects under the ELRP, under subcomponent 1.2 - *Control Measures*, appropriate control measures will be undertaken to reduce locust populations and prevent their spread to new areas mainly through targeted ground and aerial operations. Key activities will include procurement of pesticides, approved by the Pesticide Resource Group (PRG), and spray equipment, including manual and motorized pumps, vehicle mounted spray equipment, adapted spray vehicles, hire and leasing of required aircrafts to supplement aircraft to be accessed through a revamped DLCO-EA, and personal protective gear.

As of 2021, Djibouti has finalized the purchase and payment of an agricultural aircraft as well as the related contracting of an aircraft operator. Aerial spraying operations were set to start as early as September 2021, if needed.

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RWANDA

Great Lakes Trade Facilitation Project (P151083)

The Great Lakes Trade Facilitation Project (GLTFP) was approved by the World Bank on 25 September 2015 and became effective in Rwanda on 25 January 2016 following a USD 79 million IDA Credit. The Project Development Objective is to facilitate cross-border between Rwanda and the Democratic Republic of Congo by increasing the capacity for commerce and reducing costs, time, and harassment faced by traders, especially small-scale and women traders, at targeted borderland locations in the Great Lakes Region (GLR). The aviation aspect of the project includes improvement of Kamembe airport that will rehabilitate priority facilities, in particular: (i) acquisition and installation of essential navigational aids such as GNSS designed to support enhanced safety during approach and landing and appropriate aeronautical ground lighting, (ii) acquisition and installation of essential meteorological and communication systems consisting of an Aeronautical Message Handling System, and automatic weather station and a Digital Aeronautical Information Management, (iii) construction of an airport perimeter fence consistent with

ICAO standards, and (iv) installation of CCTV security system throughout the airfield. The aim is to connect to Eastern DRC to the GLR and beyond through Rwanda's main gateway Kigali International Airport.

Improvements to Kamembe Airport are the single largest sub-component of the project, accounting for more than half of the project proceeds in Rwanda. The first activity under the sub-component, fencing of the airport, was completed in November 2017. A World Bank team conducted a mission between 14-17 November 2021 to support the implementation of the project. The mission's objectives were to (i) review progress on all project components and activities that needed to be completed before the project's deadline of 30 June 2022, (ii) consult with project beneficiaries on project impacts, and (iii) visit sites where the project interventions had been completed in the previous year. The mission also paid visits to Kamembe Airport, Bugarama, and Nyamasheke, all of which are locations where the project is supporting physical initiatives.

The mission concluded that the majority of the project interventions at Kamembe airport had been accomplished. Tender Package (TP) 1 - *Airfield lighting, power, fence lighting, communications and civil works* was completed, except for a few minor faults and defects that the contractor was working on. The civil works contract required to be extended to the end of January

2022. The remaining tasks are (i) finishing structured cable system and acceptance and (ii) determining a permanent solution for the AGL control system's fail-safe operation. In regards TP2 - *Security-perimeter fencing and CCTV*, RAC had stated during the November 2019 mission that they would fund the CCTV, but their income had been damaged by the COVID-19 pandemic. During the mission, three options were proposed to RAC: a limited tender, a nationwide competitive tender, and a single source selection of the firm that worked on the TP1 (the firm that installed the pillars and cables for the CCTV system). RAC opted to go forward with a sole sources contract that the Bank approved shortly after the mission. The tender package under TP3 - *AWOS & ATIS systems* had been fully implemented. The contract under TP4 - *AMHS & D-AIM systems* was complete with the following pending items: (i) factory training of RAC staff was underway; commissioning documentation was pending from the design consultant, (ii) contractor clarification of cartography software, and (iii) replacement of damaged radio antenna and TV monitor, both of which had been approved.

The mission also noted that an agreement had been reached with the DRC on airspace management in the event of missed approaches at Kamembe Airport, and that the two countries' civil aviation authorities will sign



a Memorandum of Understanding in December 2021. The arrangement was comparable to one already in place at the Goma/Gisenyi airports for cooperation between Rwanda and the Democratic Republic of the Congo.

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TANZANIA

Transport Integration Project (P165660)

A new project is currently in the pipeline awaiting appraisal and approval by the World Bank for a 550 IDA Credit is the Transport Integration Project in Tanzania. The Project Development Objective is to improve the safety, climate resilience, and capacity of key road corridors and regional airports, as well as to improve the capacity of relevant transport sector institutions to plan for and manage the sector. The project has four components: (i) *Upgrading and Rehabilitation of Trunk and Regional Roads*, (ii) *Upgrading and Rehabilitation of Regional Airports*, (iii) *Institutional Support and Capacity Building in the Transport Sector*, and (iv) *Contingent Emergency Response*.

The second component will finance the rehabilitation and upgrading of three priority regional airports that are

exposed and vulnerable to climate change impacts, out of the eleven airports identified for upgrading under the TSSP. The interventions include addressing asset damage caused by climatic events and the further enhancement of climate resilience, energy efficiency, and safety of the airports. The capacity of the airports will also be enhanced to be able to address the demand projected for the medium to long terms, in climate resilient airport that offer international standards of safety. The designs and feasibility studies of all the eleven airports were carried out and the most feasible airports that could provide medium to long term climate resilient services have been chosen for upgrading. The three regional airports proposed for rehabilitation and upgrading are Lake Manyara, Iringa and Tanga Airports and the objective is to meet the air traffic demands for the design life of 20 years to address the potential demand from tourism and commerce activities. This component will also support (i) air navigation facilities, (ii) meteorological facilities, (iii) the associated construction supervision consultants, and (iv) land acquisition, and resettlement and rehabilitation.

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EAST ASIA & PACIFIC

Project Highlights



PACIFIC ISLANDS

Pacific Aviation Safety Office Reform Project (P145057)

The Bank approved a USD 2.15 million IDA Grant for the Pacific Aviation Safety Office Reform (PASO) in FY2014 as well as an Additional Funding (AF) of USD 0.95 million in FY2017 and a second Additional Funding (AF2) of USD 3.55 million in FY2018. The project closing date has been extended to the end of December 2022. The revised Project Development Objective (PDO) is to strengthen the Pacific Aviation Safety Office to deliver regional aviation safety and security oversight, and technical and advisory services to the Pacific Island countries. There are four components to the project: (i) *Transitional Management and Support*, (ii) *Establishment of a Pool of Regional Aviation Inspectors*, (iii) *Quality Management*, and (iv) *Supporting Regional Aviation Infrastructure*.

Within a six-month preparation period, the original project design was completed in 2013. Member states requested IDA support for an agreed-upon reform agenda after recognizing that PASO's short-term cash flow forecast and upcoming liabilities projected an impending insolvency. The AF2 will enable PASO to move closer to completing the reform activities, ensuring the continued effective and efficient delivery of safety and security oversight functions to its Pacific State Members. The most important result of the AF, along with the three-year extension of its closing date, will be that PASO will become more financially viable. The AF2 will specifically fund the implementation of a new funding mode, Capacity Development for the Regional Inspectorate Program, Quality Management Systems, and Regional Aviation Infrastructure.

Most project activities had been completed by the end of FY2020, but some planned training activities had been halted due to travel restrictions caused by the COVID-19 pandemic. Two of the PDO indicators have already been achieved, and PASO is working towards achieving the other two. The extension of the project closing date will help PASO achieve these PDO indicators as the system has been updated to adapt to the situation following the pandemic. The project (i) successfully recruited a General Manager, Operations Manager, and Corporate Services Manager, (ii) established a Register of Inspectors (ROI) comprising qualified technical experts across multiple specializations, including aerodromes, airworthiness, air navigation services, and flight operations, and (iii) recommended

an Annual Work Program implemented by PASO Members. The implementation of the latter is the core indicator of PASO's success as it shows how much effort and work PASO has completed in each state. The consultancies funded by the World Bank have all contributed to this success, with a critical consultancy being the Aviation specialist that produced the ability for remote auditing to occur. Remote auditing is now the primary way that PASO is completing its work plans with each of its Members until COVID-19 travel restrictions are lifted.



The ICAO Regional Safety Oversight Organization (RSOO) service level PDO was developed as part of AF2 in 2018 in response to ICAO turning its attention to RSOO as a mechanism for supporting states with their aviation safety and security needs. There are three levels of the RSOO status. PASO is currently at Level 1 and working towards becoming a Level 2 RSOO. Since 2021, PASO has been steadily improving with the completion of work.

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SAMOA

Samoa Aviation Investment Project (P143408)

In FY2014, an IDA Grant of USD 25 million was approved for the Samoa Aviation Investment Project, followed by an Additional Funding (AF) of USD 16.62 million in FY2016. The AF was designed to scale up the apron pavement expansions and fuel hydrant extensions needed to integrate a new terminal building. The Bank approved a second additional financing (AF2) of

USD 2.2 million from IDA in May 2019, as well as a nine-month extension of the project closing date. The Samoa project was the second phase of the regional Pacific Aviation Investment Program (PAIP). The Project Development Objective is to (i) improve the operational safety of international air transport and associated infrastructure, and (ii) to improve the operational oversight of international air transport and associated infrastructure.



The project had four components: (i) *Aviation Infrastructure Investments*, (ii) *Strengthening Policy and Regulatory Capacity*, (iii) *Strengthening Airport Operations and Management Capacity*, and (iv) *Project Support*. Key achievements include, (i) regulatory certification of safety and security at project airports, measured through compliance of the project's airport in accordance with ICAO standards, through infrastructure investments, capacity building and policy updates and (ii) modernization of air traffic management through two elements: (a) Very Small Aperture Terminal (VSAT) to enable regional Civil Aviation Authorities and air transport organizations to communicate essential safety and security communications in a reliable, secure and timely manner, and (b) Automatic Dependent Surveillance Broadcast (ADS-B) to enhance safety by making aircraft visible, in real time, to air traffic control and other appropriately equipped ADS-B aircraft. The latter also facilitates better communication with other airports in the region and provides a more efficient flight routing, which saves fuel and reduces greenhouse gases. Relevant staff were trained in the effective use of this technology and equipment. The supply and installation of Navigational Aids, Airfield Ground Lighting (AGL), and Power Systems and Air Traffic Control Equipment (ATC) were also completed in March 2020, allowing for modernized communication services that

improve operational safety. In April 2018, two refurbished fire rescue vehicles were commissioned, and Faleolo Airport is now an Airfield Rescue and Fire Fighting (ARFF) Category 10 airport. Safety screening equipment such as CCTV was also installed at all parts of the airport terminal building, increasing the level of security, and providing greater control for arriving and departing passengers as well as security controls for terminal access and management.

Further achievements of the project include, the rehabilitation of airport runways, taxiways, and aprons, the development of an Aviation Sector Strategy for Samoa, and the development of a Master Plan and business Strategy for Samoa Airport Authority (SAA). The Strategy provided an overview of the regulatory environment in Samoa, the role of air transportation, the current state of aviation infrastructure, and the challenges of regulatory oversight faced in-country. The Master Plan and business strategy focused on SAA's operations and management capacity, including (i) a thirty-year planning horizon, (ii) travel demand forecasting for passenger/freight aircraft movements for both international and domestic services, (iii) location of critical operational infrastructure that meets international service standards and regulatory compliance requirements, and (iv) recurrent expenditures for airport operations. Implementation of a regional Safety and Security Levy (SSL) for departing international passengers was also fully achieved. The government imposed a regional safety and security levy of 11 Samoan Tala (WST) on each departing international passenger. The Ministry of Works, Transport and Infrastructure (MWTI) receives 59 percent of the revenue from this levy, SAA receives 39 percent, and airlines receive 2 percent as an administration fee. Since the levy's inception in October 2015, over WST 6 million (approximately USD 2.4 million) has been collected. These funds are used to monitor the aviation industry. The Civil Aviation Division (CAD) oversaw the collection of the MWT1 portion of the levy, and the fees collected by CAD are used to prepare manuals and reports for ICAO audits, to implement ICAO's SARPs, and to pay Samoa's payments to the Pacific Union Safety Office (PASO). The funds allocated to SAA are used to maintain the equipment and pay the employees.

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SAMOA

Samoa Aviation and Roads Investment Project (SARIP) (P176272)

A new project in Samoa is in the works, with approval for a USD 66 million IBRD/IDA grant expected in FY2022. The Project Development Goal is to improve the climate resilience and safety of Samoa's aviation and road sectors, and to respond promptly and effectively in the event of an Eligible Crisis or Emergency. The project has four components: (i) *Climate Resilience and Safety Investments in the Aviation Sector*, (ii) *Climate Resilience and Safety Investments in the Road Sector*, (iii) *Strengthening the Enabling Environment*, and (iv) *Contingent Emergency Response Component (CERC)*.

The first component, which will be implemented by the Samoa Airport Authority (SAA), will support investments to improve climate resilience and aviation safety in Samoa. The project will provide technical assistance through a site options study and detailed designs for climate resilience and safety investments at Faleolo International Airport, including: a site-level flooding resilience strategy, a floor hazard assessment, integrated structural and non-structural flood resilience investment options, and phased prioritization of potential resilience investments. It will also provide technical assistance to the Ministry of Works, Transport, and Infrastructure's Civil Aviation Department in updating the Samoa Aviation Sector Strategy to ensure resilient aviation sector investment and

management, as well as technical assistance to SAA in updating the Masterplan and Business Strategy to ensure resilient airport management. Under technical assistance to SAA, the project will (i) assist in improving SAA's emergency/contingency and evacuation planning through updated plans, standard operating procedures, and stakeholder training, (ii) develop a business continuity plan to maintain critical services during disruptions and shocks, and (iii) collaborate with Samoa Meteorology Services to develop impact-based early warnings for the air transport sub-sector. The project will also entail (i) a feasibility study, design and supervision for seawall rehabilitation, (ii) a feasibility study for extending the Faleolo International Airport runway, (iii) consultancy services for design and supervision for drainage/resilience improvement at the airport, and (iv) consultancy services for design and supervision for a boundary fence at the airport.

The first component will also include the following:

- (i) the supply and installation of new navigation systems to improve operational safety (including a new Doppler Very High-Frequency Omnidirectional Radio and Instrument Landing System (ILS)), a 12-month calibration flight for the ILS to ensure it remains operational, and a WGS84 survey;
- (ii) the provision and installation of a new Automatic Weather Station;
- (iii) implementation of airport infrastructure upgrades



and improvements, as well as the installation of signage, early warning devices, and other measures to improve the airport's resilience to climate-related hazards and/or events;

- (iv) seawall rehabilitation works to mitigate the effects of rising sea levels and increasing storm surges;
- (v) construction of a boundary fence; and
- (vi) the establishment of a Regional Airport Asset Maintenance Contract to help improve the sustainability and resilience of airport assets through a five-year performance-based contract to maintain critical mechanical and electrical assets whose failure would jeopardize airport safety or disrupt operations.

The third component's aviation element will provide technical and operational management and implementation to assist the SAA in implementing SARIP. It will offer technical assistance to SAA in areas such as project management, capacity building and training, and annual operating costs. It will also provide occupational health and safety (OHS) training to SAA and contractors, as well as assistance with environmental and social consultation and supervision. It will also include gender and Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH) activities.

Despite the project's planned implementation of resilience building activities, Samoa's increasing vulnerability to climate change and severe weather events means that access to contingent financing is a critical component of its disaster risk financing policy, which is currently being developed. Therefore, the fourth component is intended to provide a rapid response in the event of an Eligible Crisis or Emergency by allowing Samoa to request that project funds be allocated to support emergency response and reconstruction. Given the lessons learned from the COVID-19 pandemic, the CERC under SARIP, like the CERC under the Samoa Climate Resilient Transport Project, will allow flexibility to support health-related response as well as broader reconstruction or rehabilitation needs following an eligible event.

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SOLOMON ISLANDS

Solomon Islands Roads and Aviation Project (P166622)

In March 2019, the Solomon Islands Roads and Aviation Project (SIRAP) received a USD 30.5 million IDA Credit and a USD 20.5 million IDA Grant to be supplemented by a USD 3.6 million counterpart funding contribution from the Solomon Islands Government (SIG). The Project Development Objective (PDO) is (i) to improve the operational safety and oversight of air transport and associated infrastructure, (ii) strengthen the sustainability and dilate the resilience of the Project Roads, and (iii) in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency. The PDO is to be achieved through five components: (i) *Honiara and Munda Airports Infrastructure Investments*, (ii) *Malaita Road Improvement and Maintenance Program*, (iii) *Institutional Strengthening*, (iv) *Project Implementation Support*, and (v) *Contingent Emergency Response*.

In terms of aviation, the project is assisting Honiara and Munda Airports Infrastructure Investments (i) to improve operational safety and overall infrastructure resilience to climate change at Honiara, allowing Munda airport to receive international flights with enhanced resilience to climatic disasters, and (ii) through contracts for survey, removal, and clearance of unexploded ordnance from the Second World War at both airports. Moreover, the project facilitates the institutional strengthening of the aviation sector through (i) training needs analysis, (ii) airport operational training, (iii) airport regulatory training, (iv) development of a strategic plan for long-term viability of Solomon Airlines (that is, airline strategy review), (v) airport master planning studies for both Honiara and Munda airports, (vi) development of an aviation sector strategy, (vii) technical assistance to the Civil Aviation Authority of Solomon Islands (CAASI) to improve safety and security oversight, and (viii) technical assistance to the Solomon Islands Airport Corporation Limited (SIACL) to strengthen airport management and operation capabilities.

SIRAP reached the third year of a six-year implementation period as of the end of FY2021. Although travel restrictions associated with the COVID-19 pandemic hampered the mobilization of international consultants and contractors, significant aviation activities



have progressed. The key achievements in relation to infrastructure investments include the completion of the (i) concept design for Munda terminal building in October 2019, (ii) Honiara Airport control tower renovation works in March 2020, with the upgraded tower being operational since July 2020, (iii) detailed design for Munda Airport runway, taxiway, and apron resurfacing in September 2020, and that for Honiara Airport runway resurfacing and airfield ground lighting in January 2021, (iv) unexploded ordnance clearance at the project sites in October 2020, and (v) installation of automatic dependence surveillance-broadcast (ADS-B) ground stations at Honiara and Munda in May 2021. In addition, progress has been made on the (i) design and build of Munda terminal building with the detailed design completed in December 2021, (ii) Munda runway, taxiway and apron resurfacing with the contract for the works signed in December 2021, (iii) very small aperture terminal (VSAT) communications system with the installation at Honiara completed (awaiting commissioning) and that at Munda underway, and (iv) ADS-B equipage for aircraft on the Solomon Islands' registry with the procurement ongoing.

The key achievements in institutional strengthening include the completion of the (i) Solomon Airlines strategy review in October 2019, (ii) Honiara and Munda Airports master plans in March 2020, (iii) Aviation Sector Strategy in October 2020, and (iv) Solomon Airlines Strategic Options Analysis in May 2021.

The Strategic Options Analysis was conducted to guide the government in managing the impacts of COVID-19 on the aviation and tourism sectors in the short and medium term. It included Solomon Airlines route analysis, traffic forecast for 2021-2040, financial analysis, and COVID-19 aviation and tourism sector recovery scenarios and strategies. The analysis led to the ongoing SIRAP support for Solomon Airlines to develop its Strategic Plan 2022-2024.

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TONGA

Climate Resilient Transport Project (P161539)

In November 2018, the World Bank approved a USD 26 million IDA Grant for the Tonga Climate Resilient Transport Project. The Project Development Objective (PDO) is to improve the climate resilience of Tonga's transport sector, and to provide an immediate response in the event of an Eligible Crisis or Emergency. The following key PDO indicators will be used to evaluate the PDO's success: (i) identified climate resilience planning tools in use, (ii) identified climate resilient investments constructed/rehabilitated and in use in the aviation and maritime sectors, (iii) identified enabling environment solutions implemented, (iv) length of roads constructed or rehabilitated with climate resilience measures, and (v) identified

climate resilient routine maintenance contracts in place and being implemented. The project's second component supports the aviation sector's infrastructure rehabilitation (Climate Resilient Infrastructure Solutions). The project will fund (i) feasibility studies, design, and physical works of identified aviation assets to improve their resilience to climate-related hazards and/or events, and (ii) urgent resurfacing of the runway and apron at Salote Pilolevu Airport, Ha'apai, which will include reconstruction of pavement layers at localized soft spots, subsoil drainage as needed, and full line marking.

By the end of 2020, the project had made reasonable progress, despite the fact that most procurement processes were running behind schedule. International travel restrictions due to COVID-19 have been in effect since March 2020, preventing international contractors and consultants from entering the country and causing project implementation to be hampered. The contract for resurfacing the runway at Ha'apai Salote Pilolevu Airport was signed and amended to accommodate COVID-19 restrictions and quarantine requirements. The contract is on hold and will be resumed once the border is open. In addition, an aviation advisor is currently being hired to assist the civil aviation department in renewing an airport safety certification.

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TONGA

Climate Resilient Transport Project II (P176208)

In December 2021, the World Bank approved a USD 38 million IDA Grant for a second Tonga Climate Resilient Project. The Project Development Objective is to improve the climate resilience and safety of Tonga's transport sector, and, in the event of an Eligible Crisis or Emergency, respond promptly and effectively to it. The project has four components: (i) *Capacity Building on Transport Planning and Policies*, (ii) *Climate Resilient and Safe Infrastructure Solutions*, (iii) *Project Management*, and (iv) *Contingency Emergency Response*. The second component entails feasibility studies, detailed design, and civil works for identified road, aviation, and maritime infrastructure in order to improve climate resilience and safety.

Tonga has six airports, two of which serve both domestic and international flights, and the other four serve only domestic travel. All airports in Tonga are operated and managed by the state-owned Tonga Airports Limited. The Civil Aviation Department, under the Ministry of Infrastructure, oversees civil aviation safety and security. Real Tonga Limited was the domestic service provider but ceased operations in May 2020 amid issues related to the COVID-19 pandemic. The government of Tonga (GoT) granted an air operator's certificate for a new airline, Lulutai Airlines, in September 2020, and it began domestic flight operations. The airline is fully owned and operated by the GoT. The World Bank was involved in the completed improvement of Lupepau'u International Airport (Vava'u) and Fua'amotu International Airport (Tongatapu) through the 2011-2019 Tonga Aviation Investment Project (TAIP) and the impending resurfacing of the runway at Salote Pilolevu Airport in Ha'apai through the Tonga Climate Resilient Transport Project (TCRTP). Over the last decade, the airport infrastructure has been rehabilitated and upgraded, but safety and resilience improvement to the airports are still needed.

TCRTP II focuses on the improvement of the safety and resilience of transport infrastructure in Tonga. TCRTP II will build on the achievements and lessons of the previous Transport Sector Consolidation Project (TSCP) and TAIP, and the ongoing TCRTP. TCRTP II will include (i) some of the TCRTP activities that were planned but could not be implemented due to budget constraints, (ii) expanded TCRTP activities, and (iii) newly introduced activities. Aviation related activities under the project will include (i) regional airport asset maintenance to improve safety and climate resilience of airport operations at international airports in Tongatapu and Vava'u through a multi-year performance-based contract to maintain critical mechanical and electrical assets, (ii) acquisition of safety equipment and facilities such as rescue fire trucks and bird strike risk mitigation equipment for international airports, (iii) detailed design and resurfacing of the runway at the Kaufana Airport in 'Eua, and (iv) acquisition of safety equipment and facilities such as rescue fire trucks, construction of a storage facility, and provision of ancillary equipment and goods at the domestic airports.

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TUVALU Pacific Aviation Investment Project (P128940)

The Tuvalu Aviation Investment Project (TvAIP), which is part of the Pacific Aviation Investment Program (PAIP), was approved on 13 December 2011 and became effective on 20 March 2012. The original approved funding was USD 12.02 million, of which USD 11.85 million was financed by IDA and USD 0.17 million from the Pacific Regional Infrastructure Facility (PRIF). The project received four Additional Financings (AF): in 2013, 2016, 2017, and 2021 additional IDA Grants of USD 6.06 million, USD 2.88 million, USD 8.75 million, and USD 6 million were provided respectively and the total approved funding for the project is USD 35.71 million. The Project Development Objective (PDO) is to improve the safety and security of air transport and associated infrastructure. The project has three components: (i) *Aviation Infrastructure Investments*, (ii) *Aviation Sector Reform and Training*, and (iii) *Strengthening Airport Operations*.

The project is now in its ninth year of a twelve-year implementation schedule. The objectives of the four Afs are summarized as follows:

- The first AF in 2013 was to scale up the ongoing TvAIP to support the resurfacing of roads which provide access to Funafuti Airport, and the building of a water cistern under the new terminal.
- The second AF in 2016 was to address a funding gap under the project and extend the closing dates for all funding sources.

- The third AF in 2017 was to find the best solution to repair the damages as a result of the water pressure under the resurfaced runway and finance (i) associated supervision cost of remediation works, (ii) Tuvalu's participation in the ICAO, (iii) activities related to Gender-Based Violence (GBV) and Violence Against Children Occupational Health and (iv) Safety (OHS) and Environmental Social Management Plan (ESMP) monitoring tools and training for civil works contractors.
- The fourth AF in 2021 was to cover a cost overrun and to ensure that the project meets its PDO.

While key project activities have been completed, the project has encountered several challenges. Construction of major infrastructures, i.e., the terminal building and the traffic control tower, as well as remedial works to address defects on the apron, were completed in December 2019. Detailed designs and specifications for pavement rehabilitation were also completed in 2019 and the bidding process of the rehabilitation was launched. After an unsuccessful bidding process, GoTv reassessed their approach to runway remediation works. In August 2020, GoTv advised that its preferred course of action is to re-tender the rehabilitation of the 600m of the most deteriorated section of the runway. To ensure that the project will have sufficient time and funds to complete the rehabilitation works, GoTv requested an extension of the closing date of the project to 15 December 2022, and additional financing of USD 6 million to fill the financial gap of the runway rehabilitation work. The extension of the closing date was processed through the project restructuring in October.

Under the assumption that the travel ban was lifted in November 2021, the proposed work can be completed



before the current closing date. While some of the procurement activities such as pre-bid meetings can be done virtually, it would take about 12 weeks to complete a 600m runway rehabilitation work in Tuvalu, considering the need for importing materials, equipment, and labor internationally as well as Tuvalu's unstable weather conditions, and the need to create an alternative flight schedule due to restrictions on landing and take-off during the civil works period.

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EUROPE & CENTRAL ASIA

Project Highlights



KYRGYZ REPUBLIC

Central Asia Regional Links Program - Phase 3 (P159220)

The World Bank approved a USD 27.50 million IDA Grant and a USD 27.50 million Credit for the Central Asia Regional Links Program - Phase 3 (CARs - 3) in October 2018. The Project Development Objective is to improve regional connectivity and support long-term tourism development in Issyk-Kul Oblast. The project has three components: (i) *Regional Connection, Associated Facilities and Equipment*, (ii) *Aviation Safety and Service Provision*, and (iii) *Sustainable Tourism Development*. Under its second component, the project helps to strengthen the aviation sector's safety and service provision, which would assist the Civil Aviation Agency (CAA) in meeting ICAO's international safety standards and recommended practices, as well as overcoming the EU's current blacklist of Kyrgyz carriers, enhancing local carriers' growth opportunities, and ultimately increasing the country's level of connectivity, benefiting both local residents and international visitors.

A World Bank team conducted a virtual implementation support mission for the Third Phase of the Central Asia Regional Links Program from 2-9 June 2021. The main objectives of the mission were to (i) review the status of the project activities under Component 1, Component 2 and Component 3, (ii) review the timeline of implementation and discuss Bank support to expedite progress of various activities, (iii) review financial management and disbursements, as well as procurement issues, (iv) review social and environmental safeguards, (v) review monitoring and evaluation data collection and Results Framework, and (vi) agree on an update action plan to expedite the implementation progress.

The team discussed the aviation safety and service provision component of the project during the mission and noted that progress was made only in the preparation of the various Terms of References but not in procurement since the previous mission. Compliance with aviation safety standards and recommended practices measured by USOAP has been achieved based on the results of the latest ICAO audit conducted 8-12 April 2019. While the overall indicator had



been achieved, it was agreed that the focus should be on improving the indicators of three critical elements, which were rated the lowest in the ICAO audit (those being, (i) the qualified technical personnel with a compliance level of 35.71 percent, (ii) surveillance obligations (53.95 percent), and (iii) resolution of safety issues (54.35 percent)). All three indicators are expected to be improved by the project's closing date. The mission stressed the point that the CAA must perform a gap analysis in order to determine the training needs throughout the organization regardless of their USOAP score.

The mission elaborated on the set objectives for the sector's development and confirmed the way forward for implementation, which includes: (i) elaboration of an Air Transport Masterplan for the Kyrgyz Republic, which includes policy elements in regards to fostering the development of air transportation, facilitating market access and competition, as well as environmental and governance issues (the Masterplan may be issued as a formal White Paper to be formally adopted by the Government), (ii) a review of the institutional set-up of the governmental regulatory and economic oversight and governance of the sector, and (iii) an in-depth analysis of the current state of aviation safety and security. The latter includes the following sub-components: (i) an assessment of the regulatory oversight by the Kyrgyz Civil Aviation Agency (CAA), including a gap analysis in terms of personal skills and training needs, (ii) the en-

hancement and development of an Aviation State Safety Program (SSP), (iii) provision of training safety inspectors and other staff of CAA, (iv) procurement of software and equipment to upgrade CAA's record-keeping capabilities, and (v) a review of the educational program of the Kyrgyz Aviation Institute (KAI), capacity building, and acquisition of testing software for aviation personnel and a flight training device, as well as modernization of KAI facilities where deemed necessary.

As for next steps, the Bank confirmed that the focus should be on a Needs Assessment (CAA Gap Analysis), which would justify the implementation of capacity building and procurement of hardware and software. This would be followed by the elaboration of the Aviation Masterplan, and the review of the educational program of the KAI. Despite the low disbursement rate, the project has made significant progress since the last mission, and key technical studies under the Aviation and Tourism components are in procurement processes, and design for five tourist service centers and author supervision has commenced as of November 2021.

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LATIN AMERICA & CARIBBEAN

Project Highlights



BOLIVIA

National Roads and Airport Infrastructure Project (P122007)

A USD 109.5 million IDA Credit was approved by the World Bank in FY2011 and became effective in FY2012 for the Bolivia National Roads and Airport Infrastructure Project. The project has been extended three times, the latest extension was approved in October 2018, with a new closing date of 7 August 2022. The current amount of credit awarded for the project is USD 91.7 million. The Project Development Objective is to improve (i) year-round transit ability of the San Buenaventura-Ixiamas, and (ii) the safety, security, and operational reliability of the Rurrenabaque Airport. The project has three components: (i) *Improving the San Buenaventura-Ixiamas National Road*, (ii) *Improving the Rurrenabaque Airport*, and (iii) *Institutional strengthening of the road agency, Administradora Boliviana de Carreteras (ABC), the airport authority, Administracion de Aeropuertos y Servicios Auxiliares a la Navegacion Aerea (AASANA), and other relevant entities.*



The second component has been executed by the airport agency, AASANA, which was responsible for most airports in Bolivia. The scope of the component is the upgrading and modernization of a small regional airport in Rurrenabaque, with the construction of a terminal building, control tower, technical building, access road, taxiway, and apron. All civil works and supervision started in May 2018. According to AASANA, the physical progress of the works contract stood at 85 percent as of October 2021, with the contract finalization date set for 20 January 2022. In 2019, the Government of Bolivia (GoB) requested a

reallocation of funds from the first to the second component in order to finance (i) additional civil works not previously contemplated in the parent project preparation, including paved fire truck access, secure airport perimeter fencing works, platform construction, taxiway, and drainage system, (ii) safety, meteorological, medical, and security equipment necessary for the modern, safe, and efficient operation of the completed airport, and (iii) support to the Project Implementation Unit (PIU) within AASANA. The corresponding amendment to the financing agreement was approved in December 2019. On 1 December 2021, the GoB dissolved AASANA and a new agency, Navegacion Aerea y Aeropuertos Bolivianos (NAABOL), was created to replace it. NAABOL assumed the contracts, licenses, agreements, credits, and any other administrative tasks that were signed by AASANA.

Overall, the first phase of the project was completed, and the World Bank team participated in the inauguration on 21 March. The second phase should resume soon once the restructuring is complete.

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DOMINICA

Caribbean Regional Air Transport Connectivity Project (P171224)

The World Bank approved a USD 13 million IDA Credit in May 2020 for a Caribbean Regional Air Transport Connectivity Project in Dominica. The Project Development Objective was to (i) improve operational safety and resilience readiness to natural disasters in air transportation and (ii) strengthen the capacity of key agencies in air transportation operations and airport investment planning. The project had four components: (i) *DOM and DCF Safety and Resilience Improvements*, (ii) *Technical Assistance and Institutional Strengthening*, (iii) *Project Management*, and (iv) *Contingent Emergency Response*. The first component aimed to enhance the safety and resilience of Dominica's existing two airports and support Dominica's efforts to comply with ICAO SARPs and abide by the Port of Spain Declaration. The second component aimed to provide regional and Dominica-specific technical assistance to Dominica's air transport sector. The third component was designed

to assist the Prime Minister's Office in its project management activities, specifically the dedicated Project Implementation Unit (PIU), which was in charge of overall project management, supervision, fiduciary control, monitoring, and evaluation. While the last component aimed to provide an immediate response to an eligible emergency.



Implementation actions were initiated, including the identification/appointment of the head of the PIU, Financial Management and procurement specialist. The Project Operations Manual and CERC were also finalized and the Terms of References for the (i) COVID response strategy, (ii) International technical specialist, (iii) International procurement Consultant, and (iv) Environmental/Social specialists, were drafted. A remote supervision mission was also undertaken in September 2020. However, in October 2020, the project was cancelled at the request of the government of Dominica.

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EASTERN CARRIBBEAN SUB-REGION **Regional Disaster Vulnerability Reduction** **Project (P117871)**

The World Bank approved a USD 7 million PPCR Grant, USD 3 million SCF Loan, and 10.92 million IDA Credit, amounting to USD 20.92 million, for an Eastern Caribbean Regional Disaster Vulnerability

Project in June 2011. The Project Development objective aims at measurably reducing vulnerability to natural hazards and climate change impacts in the Eastern Caribbean Sub-region (Grenada, Saint Vincent, and the Grenadines). The Project has four components: (i) *Prevention and Adaptation Investments*, (ii) *Regional Platforms for Hazard and Risk Evaluation, and Applications for Improved Decision Making*, (iii) *Natural Disaster Response Investments*, and (iv) *Project Management and Implementation Support*.

The second component supports building the regional capacity for assessment of natural risks and integration of such assessment into policy and decision making process for the development of investments, disaster risk mitigation, and disaster response across sectors, through the provision of technical advisory services, training, and acquisition of goods by (i) facilitating regional collaboration, including knowledge sharing and learning processes to develop and apply construction standards and methods for critical public infrastructure and urban flood mitigation, and to strengthen regional collaboration for urban and flood risk reduction, reducing the risk of regional interconnectivity and carrying out related supporting studies, including improving the international airport to maintain an adequate emergency response capability and to comply with the international operational standards.

The third component will finance emergency recovery and reconstruction subprojects under an agreed action plan of activities designed as a mechanism to implement the recipient's rapid response to an emergency. Under this component, expenditures on critical imports and reconstruction/rehabilitation of damaged infrastructure will be financed (inclusive of air transport equipment).

As of FY2021, (i) Saint Vincent and the Grenadines' project has been critical in supporting the emergency response following the La Soufriere volcano eruption, and (ii) Grenada's project has contributed towards building resilience to disaster and climate risks by strengthening infrastructure and building technical and institutional capacity.

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GRENADA

Caribbean Regional Air Transport Connectivity Project (P172951)

On 28 May 2020, the World Bank approved the Grenada Caribbean Regional Air Transport Connectivity Project with a USD 17 million IDA Credit. The Project Development Objective is to (i) improve operational safety and navigation efficiency of air transportation, (ii) increase the climate and disaster resilience of Maurice Bishop International Airport (MBIA), and (iii) strengthen Grenada's capacity in civil aviation and airport management. The project has four components: (i) *Operational Safety and Resilience Enhancement*, (ii) *Technical Assistance and Capacity Building*, (iii) *Project Management*, and (iv) *Contingent Emergency Response*. The first component would improve MBIA's operational safety and resilience and support Grenada's efforts to comply with ICAO SARPs and abide by the Port of Spain Declaration. The second component aims to strengthen the institutional capacity of the Grenada Airports Authority (GAA) and Civil Aviation Division through a combination of regional and Grenada-specific tech-

nical assistance and capacity building activities with a focus on enhancing aircraft operational safety, air transport sector regulator oversight, airport management capability, climate/disaster resilience, and gender diversity in the workspace. The project would be implemented by the Ministry of Infrastructure Development, Public Utilities, Energy, Transportation and Implementation (MOIID) with close coordination and participation from lineage agencies, including the Ministry of Tourism and Civil Aviation (MOTCA), and the GAA responsible for MBIA. Furthermore, the fourth component will provide immediate response to an eligible emergency.

The project is effective from November 2020. The implementation arrangement is almost complete. In addition, the procurement process for priority activities (consultancy services) is underway. A World Bank virtual mission was conducted on 1-4 February 2021, with the objectives of (i) confirming the planning and prioritization of activities, (ii) initiating the preparation of Terms of Reference for the activities to be procured in the 6 following months, (iii) agreeing on the scope of COVID-19 response activities



(strategy study, health screening equipment, drone study), (iv) confirming the project implementation staffing arrangement and reviewing of agreements between the government and Grenada Airport Authority, (v) confirming progress on actions listed in the Environmental and Social Framework instruments and planning for virtual consultation, (vi) finalizing the Operations Manual, and (vii) discussing regionally-coordinated training activities and ICAO compliance screening.

The mission recognized the progress made since effectiveness and during the mission: (i) the priority activities for the first year of implementation were agreed, (ii) several Terms of Reference and one set of bidding document are at an advanced stage of preparation, (iii) the virtual safeguards consultation plan was prepared with agreed dates for implementation, (iv) the core implementation team on Government side was confirmed by MOIID, (v) the operations manual is almost completed (pending the CERC annex). The team also discussed the possibility of including Grenada in a grant-funded technical assistance program for all CATCOP countries on air transport resilience.

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HAITI

Caribbean Regional Air Transport Connectivity Project (P170907)

On 28 May 2020, the World Bank approved a USD 84 million IDA Grant for the Haiti Caribbean Regional Air Transport Connectivity Project. The Project Development Objective is to (i) improve operational safety and navigation efficiency of air transport, and (ii) increase the climate and disaster resilience of associated infrastructure at Haiti's international airports.

The project includes four components: (i) *Port-au-Prince's Toussaint Louverture Airport (PAP) and Cap-Haitien International Airport (CAP) operational safety and navigation efficiency investments*, (ii) *PAP and CAP airfield drainage system improvements*, (iii) *Institutional strengthening and project management*, and (iv) *Contingent Emergency Response*. The first component would support infrastructure and equipment in Haiti's two international airports aimed at improving aircraft operating conditions in compliance with international safety standards as per the re-

quirements of the ICAO SARPs and National Office of Civil Aviation (OFNAC) (Annex 6) and improving navigation/taxiing efficiency to better accommodate existing traffic volumes and air traffic surges associated with post-disaster relief flights. Thus, it aims to (i) rehabilitate the CAP runway, (ii) expand PAP taxiway and aircraft parking, (iii) construct ICAO-required runway end safety areas for both PAP runway ends, (iv) construct a CAP air traffic control tower as well as replace and install communication and surveillance technology, and (v) implement ADS-B for PAP and CAP.

The investments under the second component seek to reduce the risk of airfield flooding associated with the annual rainy season, hurricanes, and climate change at PAP and CAP by increasing the drainage capacity at both airfields and thus improving their climate/disaster resilience. The third component aims to strengthen the institutional capacity of the Ministry of Public Works, Transportation and Communication, National Airport Authority (AAN), and OFNAC to manage, operate, and oversee airport operations and their development through a combination of Technical Assistance (TA) activities and training. It also aims to provide TA to assess the capabilities, needs, and opportunities for the use of Unmanned Aircraft Systems (UAS) in Haiti to define the associated legal framework, as well as to support the government of Haiti (GoH) in the identification and development of potential logistic and supply chains. And lastly, to finance project implementation support. With respect to institutional capacity, the focus would be on enhancing (i) aircraft operational safety and associated air transport sector regulatory oversight, (ii) the quality of airport management, operations, and maintenance, and (iii) capacity for improving climate/disaster resilience and gender diversity in the aviation sector.

A world bank team conducted a virtual supervision mission on 24-25 February 2021, as well as a review session 16 March 2021 of the Regional Air Transport Connectivity Project in the Caribbean - Haiti component (HT-CATCOP). The mission focused on (i) the review of the Terms of Reference being prepared and finalized, (ii) the development of the action plan for the next three months, (iii) preparation of the training plan and identification of priorities relating to technical assistance, and (iv) review of conditions attached to financial management, procurement, and environmental and social safeguard instruments. The

mission agreed on priority actions as follows: (i) finalizing the Terms of Reference for the Project Management Assistance (AMO) and launching of the selection process for the AMO, which would support the Central Execution Unit, (ii) review and finalization of the Terms of Reference attached to the activity relating to unmanned aircraft systems (UAS), (iii) recruitment of technical specialists, and (iv) submission of a training plan for the next 6 months for AAN and OFNAC staff.

The discussion held during the mission made it possible to define the outlines of the service for the development of UAS systems in Haiti under the technical assistance program. The mission identified two areas of work for the implementation of this activity: (i) in the short term, the definition and implementation of a UAS pilot project, and (ii) in the medium term, technical assistance for strengthening the regulatory framework of UAS activities in Haiti. The mission also noted that the number of air routes has been reduced due to reduced demand or border controls and quarantine requirements implemented to limit the spread of COVID-19. Thus, the possibility of the project funding a COVID-19 response strategy study was discussed. This study should quickly identify (i) additional health control and protection measures for passengers and staff and (ii) a plan to mitigate the negative organizational and financial impacts of the pandemic on the AAN and the OFNAC. With regard to organizational and financial resilience, the study will identify (i) the immediate organizational and financial challenges posed by the reduction in air traffic and revenues and (ii) the longer-term post-pandemic challenges with regard to a future resumption of activities.



In regards to the AAN and OFNAC, the discussions focused on the reinforcement activities to be prioritized for the next six months by both institutions. Longer-term strengthening activities will be specified through the launch of an institutional diagnostic study aimed at identifying the needs for each entity with regard to their mandate and constraints. The mission also noted with satisfaction that the environmental safeguard specialist attached to CATCOP has been recruited, as well as the communication specialist. The accountant attached to the project as well as a financial management specialist were also recruited.

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SAINT LUCIA Caribbean Regional Air Transport Connectivity Project (P170860)

On 28 May 2020, the World Bank approved a USD 45 million IDA Credit for the Saint Lucia Caribbean Regional Air Transport Connectivity Project. The Project Development Objective is to (i) improve operational safety and navigation efficiency of air transport and (ii) enhance the resilience of Saint Lucia's airport infrastructure to natural disasters. The project has five components: (i) *Improvement of UVF Runway Safety and Resilience*, (ii) *Modernization of Air Navigation Systems*, (iii) *Institutional Strengthening*, (iv) *Project Management*, and (v) *Contingent Emergency Response*.

The first component seeks to improve the operational safety and flood disaster resilience of Saint Lucia's UVF runway, and supports Saint Lucia efforts to comply with ICAO SARPs through a series of priority civil works and related activities. The civil works include (i) runway rehabilitation, upgrading, marking and LED lighting system installation, (ii) paved stopways and Runway End Safety Areas (RESAs) construction, (iii) airfield drainage and flood protection improvements, and (iv) Crash Fire Rescue improvements. Technical assistance would be provided for corresponding design and supervision, environmental and social safeguards activities, and works under the first component. The second component seeks to improve air traffic safety and efficiency through the modernization of air navigation systems through (i) the acquisition of Instrument Landing System (ILS) and ADS-B equipment, including one or more ground stations, a receiver antenna, air traffic control tower monitors, and onboard transmitters for Saint Lucia-based aircraft, and (ii) the provision of technical assistance.

The third component aims to strengthen the institutional capacity of the government of Saint Lucia for managing, developing, operating, and overseeing their airports and air transport operations through a combination of regional and Saint Lucia's specific technical assistance activities. Under this component, activities include (i) review and gap analysis on institutional and operational management of the airports in Saint Lucia, (ii) capacity building in the areas of air traffic control and airport management, including natural disaster and climate change resilience and air traffic safety and security oversight, (iii) promotion of female professionals' opportunities through a gap analysis, recruitment action plan, and training specialized for potential female professionals on airport operation and management such as air traffic control, as well as professional development for existing female staff, (iv) preparation of a medium-term recovery strategy from the COVID-19 crisis, and (v) an assessment on the use of unmanned aircraft systems.

The Financing Agreement was signed on 31 July 2020 and the project was declared effective on 16 October 2020. A World Bank virtual supervision mission was conducted over the period 17-19 February 2021 with the objectives of (i) reviewing the bidding document and Terms of References for the activities to be procured in the next 6 months, (ii) reviewing and agreeing on activities to be launched in the next year, and (iii) agreeing on the scope of COVID-response activities (strategy study), (iv) reviewing the disbursement and financial management arrangements, (v) discussing regionally-coordinated training activities and ICAO compliance screening, and (vi) confirming progress on actions listed in the Environmental and Social Framework instruments and plan for virtual consultations. Implementation progress was achieved to enable the launch of key activities, including the following:

- (i) improvements, and the COVID-19 Response Strategy Study.
- (ii) The recruitment process is ongoing for four out of seven Project Implementation Unit personnel (Project Manager, M&E Specialist, and Procurement Officer, E&S Specialist).
- (iii) The terms of reference are finalized for the remaining three personnel (Air Navigation Specialist, Airport Structural Specialist, Short-term International Procurement Consultant).
- (iv) An advanced draft of the Project Operations Manual was developed.

(v) The Project's Chart of Accounts was developed.

As of FY2021, the Project Implementation Unit is now staffed, and key Terms of Reference are being finalized. The procurement process for the elaboration of key studies launched includes: (i) a COVID CRSS strategy, (ii) firefighter control room upgrade and airfield resilience plan, and (iii) the design study for Hewanorra International Airport's airfield improvements.

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SINT MAARTEN

Sint Maarten Airport Terminal Reconstruction Project (P167974)

On 18 September 2019, the World Bank approved a USD 72 million IDA Grant for the Sint Maarten Airport Terminal Reconstruction Project. The Project Development Objective is to restore the passenger capacity of Princess Juliana International Airport to pre-Hurricane Irma levels with improved resilience towards hurricanes.

The project will contribute to the reconstruction program of Princess Juliana International Airport (PJIA) through restoring the passenger terminal function with improved resilience to future hurricanes and safety of the airport. The program includes the reconstruction of the passenger terminal as well as other key airport facilities such as the air traffic tower, firefighter facilities, fuel farm relocation, and runway rehabilitation. As requested by the Government of Sint Maarten (GoSM), the project will focus on the terminal reconstruction, which is the most critical and the largest work, while keeping the existing building structure. The project is a USD 129 million operation financed by a USD 92 million World Bank managed Trust Fund Grant (TF), USD 50 million European Investment Bank (EIB) loan, and USD 7 million of counterpart funds. The Project has four components: (i) *Reconstruction of the PJIA terminal facilities*, (ii) *Capacity Building of and Project Management by PJIAE*, (iii) *Capacity Building of and Project Management by the Government of Sint Maarten*, and (iv) *Support of PJIAE Operations*. The first component will support the reconstruction of the PJIA terminal facilities to restore airport function and improve its resilience to hurricanes through terminal facility restoration and equipment reinstallation (passenger boarding bridges, entrance doors, dry walls, furniture/counters, electrical and IT systems, baggage

handling systems, security installations, and firefighter facilities). The second component will support, among others, operating costs required for meeting the Bank's requirements on environmental and social safeguards and fiduciary. This component will also finance capacity building activities such as resilience and air traffic safety management, based on the need assessment during the implementation. The third component will support, among others, training capacity building activities for the GoSM, including airport management and governance. The fourth component will support the operations of Princess Juliana International Airport Operating Company N.V. (PJIAE) through the financing of Select PJIAE Operating Expenditures so that PJIAE can continue PJIA's operations without interruption during the construction period.

An additional financing of USD 20 million was approved in December 2021 and is pending signing by

the GoSM. This is needed to cover the total cost of construction. The contract for terminal reconstruction was awarded in July 2021 and signed in August 2021. Contract commencement and handover of site took place in October 2021. The Project Implementation Unit is fully staffed and mobilized. This component also finances other specialists and project audits. An evolution in the key indicators is expected in the coming review period now that the main works are being launched, and this will be updated regularly.

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SOUTH ASIA

Project Highlights



BHUTAN

Hydromet Services and Disaster Resilience Regional Project (P154477)

In FY2017, the Bank approved a USD 3.8 million IDA Grant to the Royal Government of Bhutan for a Hydromet Services and Disaster Resilience Regional Project. The Project Development Objective is to strengthen Bhutan's capacity for hydromet services and disaster preparedness. The project included three components: (i) *Hydromet Services Improvement*, (ii) *Disaster Preparedness and Response Capacity Improvement*, and (iii) *Design of an Agromet Decision Support System*.

The project was signed on 21 September 2016 and became effective on 3 October 2016. The project closed on 30 June 2021 with implementation over four years and eight months. The project was initially supported by three Trust Fund grants. Both Project Development Objective outcomes were substantially achieved: (i) to strengthen Bhutan's capacity for hydromet services, and (ii) to strengthen Bhutan's capacity for disaster preparedness. The first outcome was achieved through (i) the first component, which focused on strengthening the capacity of the National

Center for Hydrology and Meteorology (NCHM) to improve hydromet monitoring, forecasting, and service delivery to priority sectors, and (ii) the third component, which focused on designing and piloting a decision support system for delivering agromet services to farmers in selected districts of Bhutan. The results reported are an improvement in the accuracy of 72-hour weather forecasting, development of a Flood Forecasting Decision Support System, improvement in aviation met services and that of the Department of Agriculture through the development of an Agromet Decision Support System. The second outcome was achieved through the second component, which focused on strengthening the capacity for disaster preparedness of the Department of Disaster Management (DDM) and relevant agencies. The project was instrumental in (i) strengthening emergency communications and developing a disaster management information system for pre-crisis data by DDM, (ii) strengthening emergency helicopter services through the establishment of four helipads, (iii) procurement of two fueling stations, and (iv) training of four Bhutanese helicopter pilots and building the capacity of key agencies.

Key achievements in the aviation related activities under the first outcome include strengthening of aviation meteorology. The aviation weather operation system of Paro International Airport was strengthened through the installation of a ceilometer, AWOS, and a wind profiler, and that of Bumthang Domestic Airport through the installation of a ceilometer to improve the safety of flight operations. Hands-on training was provided for operational staff to utilize this equipment.

Key achievements in aviation related activities under the second outcome include the strengthening of emergency helicopter services:

- Strengthening of helicopter operations for emergency services. The project built the institutional capacity of the Royal Bhutan Helicopter Services Limited for critical emergency services. Four helipads were constructed under the project, at Monggar, Samtse, Phobjkha, and Lunana, respectively. The project also financed two portable fueling stations for the helicopters to increase the flight distance of the helicopters for operations that are further away from the Thimphu and Paro fueling stations.



- Training of pilots. Four helicopter pilots of the Royal Bhutan Helicopter Services Limited were trained. It is expected that as they accumulate flying hours and gain further experience in flying, the pilots will participate in firefighting, lifting of emergency patients, and dropping of emergency supplies such as vaccines, in support of the country's emergency response.

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PAKISTAN Hydromet and DRM Services Project (P163924)

In May 2018, The Bank approved a USD 188 million IDA Grant to the Government of Pakistan for Hydro-Meteorological and Disaster Risk Management Services (DRM) Project (PHDSP), whose development objective (PDO) is to strengthen Pakistan's public sector delivery of reliable and timely hydro-meteorological and disaster risk management services. One of the main objectives is to provide meteorological services for aviation, given that the Paki-



stan Civil Aviation Authority needs improved and more automated hydromet services, including forecasts for flight operations.

The project has three main components. The first component (Hydro-meteorological and Climate Services) includes four sub-components: (i) Institutional Strengthening and Capacity Building, (ii) Modernization of the Observation Infrastructure, Data Management, and Forecasting Systems, (iii) Enhancing Pakistan Meteorological Department (PMD) Service Delivery and Building Partnerships with the Private Sector, and (iv) Project Management, Systems Integration, and Monitoring and Implementation Support of PMD. The second component, DRM, consists of three subcomponents: (i) Legal Policy and Institutional Strengthening, (ii) Infrastructure for Resilience, and (iii) Project Management, Monitoring, and Implementation Support of National Disaster Management Authority (NDMA). The third component (Contingent Emergency Response Component (CERC)) will support preparedness for a rapid response to climate and natural disasters, emergency, and/or catastrophic event as needed.

At the end of FY2020, a major restructuring of the project was completed, and the project was signed and declared effective in May 2020, after almost two years of Board approval during which implementation could not move ahead. The restructuring responds to the government's new and ambitious priorities on ecosystem restoration, climate resilience, and enhancing community resilience to pandemic shocks and address socio-economic disruptions caused by COVID-19 pandemic. Since the signing, a number of upstream actions are underway or have been completed, albeit at a slow pace due to the COVID-19 restrictions. Activities to strengthen services for the aviation sector will be supported under Sub-component 1.2 - *Modernization of the Observation Infrastructure, Data Management, Forecasting Systems and Services*. The project is currently undergoing restructuring.

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IBRD/IDA: AIR TRANSPORT ADVISORY

HAITI, GUATEMALA AND BRAZIL Support for Remotely Piloted Aircrafts (Drones) Projects and Operations in Haiti, Guatemala and Brazil Project (P176634)

The GIF is supporting the World Bank in financing a consultancy of PricewaterhouseCoopers (PwC) to undertake the development of innovative pilot activities for Remotely Piloted Aircraft (RPA) usable in the LAC region, with a focus on three main pilot countries: Haiti, Guatemala, and Brazil, due to their respective governments' interest in exploring this innovative initiative and their potential to benefit from future sector initiatives. The project will entail briefly analyzing successful existing examples, such as the African Drone Forum (Lake Kivu Challenge) carried out by the World Bank Transport GP under the Unlocking Drones for Development Project (P171737), other previous drone applications done in LAC, and the Zipline project experience in Rwanda and Ghana.

The review aims to identify key drivers and market fundamentals for commercial operations, as well as to assess opportunities, regulatory frameworks, market players, and barriers to developing drone applications in the LAC context. Although some countries are exploring the possibility of drone use for delivering medicine and goods, operations are still rare. The overall objective is for the World Bank to learn about a developing sector and provide potential future support in operations by including drones' subcomponents in the future implementation in the Region, as well as to create a Regional Forum and Challenge in

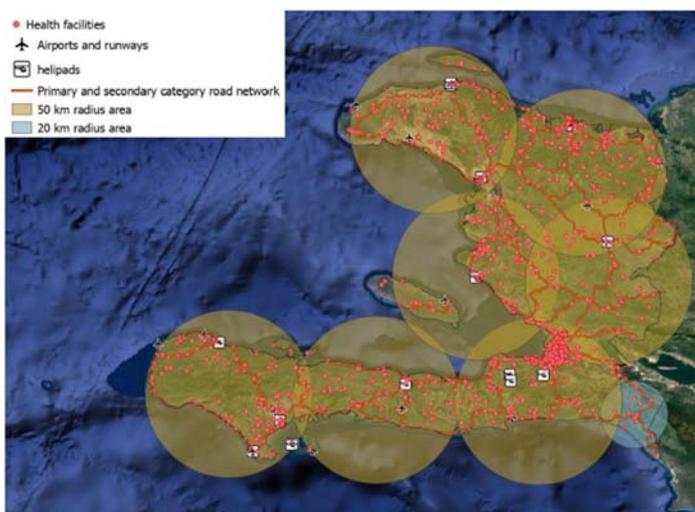
a similar way that was created in Africa. Currently, the World Bank team is working with consultants on the definition of pilot-projects in the three countries.

PwC was selected through a competitive and open tender to carry out this work, which is divided into the following phases:

- (i) Phase I: the Latin American and the Caribbean Region (LCR) drone ecosystem, international experiences and best practices, and future planning – analyzing the current drone ecosystem in the LCR and establishing benchmarks based on best practices from around the world.
- (ii) Phase II: Drone Operations in LCR– business model analysis and market potential value and size assessment in LCR.
- (iii) Phase III: Pilot Project Proposals and Report– providing a strategic roadmap with recommendations for changes/evolution of drone initiatives, drone regulation, and drone-related processes for each of the proposed countries (Guatemala, Tocantins State, and Haiti).

The original scope of work included the following:

- (i) International experiences and future thinking: an assessment of successful and commercially feasible international cases of drone operations, identification of key factors, and potential adaptation to the LAC context.
- (ii) Understanding potential market players.
- (iii) Regulatory frameworks: understanding the regulatory requirements for launching a commercial drone operation, minimum security and infrastructure requirements, necessary elements to unlock commercial drone operations in the region, and an assessment of minimal required regulations and existing applicable regulations in Guatemala, Brazil (primarily in the State of Tocantins), and Haiti.
- (iv) Business models: identification of the most favorable and commercially appealing business models (such as concessions) for developing viable drone operations in the LAC context, particularly in the pilot countries.
- (v) Preliminary assessment of potential investment



needs at pre-feasibility level.

- (vi) Government commitment: an assessment of the government's involvement in the project (for the pilot countries).
- (vii) Citizen engagement: for potential project implementation, business models should consider incorporating a citizen engagement angle, such as technology development, fabrication of drones or components, pilot training, and maintenance of necessary infrastructure and drones.
- (viii) Contribute to the development of pilot drone initiatives by the Guatemala, Tocantins, and Haiti Governments: supporting the preliminary activities associated with the implementation of pilots that can be replicated across the continent. This could include regulatory sandboxes and innovative techniques for procuring drone equipment or services, resulting in the incorporation of emerging technologies into their pool of development tools.

The project now includes an additional scope of work as follows:

- (i) Quality assurance: verification, analysis, and provision of comments and recommendations for the Government of Tocantins on the pilot project's technical deliverables.
- (ii) Defining the exact requirements for data parameters and required hardware.
- (iii) Analyzing scalability of the results and provision of recommendations for future drone projects on larger scales.
- (iv) Analyzing and recommending resources required by the Government of Tocantins to implement the technology (e.g., human, software, IT infrastructure, etc.).
- (v) Summary of lessons learnt from the preparatory and procurement phase.
- (vi) Analyzing the applicability of the drone technology for all selected scenarios,
- (vii) Defining the next steps and the high-level implementation roadmap.

PwC has already delivered and presented Phase I and II reports, incorporating World Bank comments, while Phase III is being implemented. PwC also met with the governments of Guatemala and Haiti, and conducted additional research on country-specific is-



issues in order to begin implementing the pilots in both countries. In Guatemala, the team met with the Ministry of Health, which expressed interest in promoting commercial drone operations to overcome barriers to the supply of priority goods such as medical supplies and other health facilities caused by difficult road infrastructure and logistical issues. In the State of Tocantins, PwC met with local government institutions for several months to determine the scope of the pilot activity, which was included as part of the Tocantins Integrated Sustainable Regional Development Project (PDRIS), which was implemented with World Bank funds until the end of December 2021. It was agreed that the pilot would support three Tocantins government agencies (Naturatins, SEAGRO, and SEMARH) and would focus on environmental protection, monitoring deforestation activities, and wildfire prevention. PwC also assisted the State of Tocantins in planning the pilot, identifying the right technological provider, and assisting the local government in justifying the hiring of a local drone company (Xmobots) to gather and process drone data, testing different technologies to allow a deeper analysis for future deployment and scalability.

IRAQ

IRAQ InfraSap for Connectivity (Transport, Digital Development & IPG) Project (P174852)

The infraSAP for Connectivity Project features data-based analysis of the state of transport and digital development institutional and physical infrastructure, including key challenges and opportunities towards green, inclusive, integrated, and sustainable connectivity in Iraq. This includes a review of the regulatory

framework, government decisions, the trend in budget allocations for transport and digital development sectors, and opportunities for private capital mobilization.

The scope of the InfraSAP encompasses the following tasks:

- (i) Analysis of infrastructure performance and investment needs considering the current status of service delivery in terms of access and quality and estimates of demand.
- (ii) Analysis of the institutional, regulatory and governance environment for infrastructure investment in terms of capacity and systems for infrastructure planning, regulation, budget allocation, contractual oversight, and broader public investment and procurement capacity.
- (iii) Scoping of the potential contribution of the private sector or other non-state solutions to meeting infrastructure needs. This will include reviewing the current role of the private sector in delivering infrastructure services in the country and the conditions that constrain the effectiveness or efficiency of those enterprises, as well as the opportunities and potential barriers or constraints on other forms of private sector investments.
- (iv) Roadmap for meeting priority infrastructure needs, emphasizing the potential for private sector or non-state solutions that are sustainable and scalable,

and reflect on and address where possible the regulatory, security and other risks. The roadmap will set out the combination and potential sequencing of investment and institutional, regulatory, governance, and capacity building actions to unlock those solutions.

- (v) Consultation towards reaching key stakeholders' consensus and securing commitment and ownership of the road map and associated institutional and regulatory reforms.

The above tasks will draw, wherever possible, on existing or on-going analysis at the sector or cross-cutting level as well as several investment projects in the relevant sectors.

IRAQ

White Paper on the Iraqi Air Transport Sector Development Priorities

The prime objective of the White Paper on the Iraqi Air Transport Sector Development Priorities, delivered in February 2021, is to establish the long-term policy objectives for the air transport sector in Iraq. The White Paper discussed the current situation and outlook of the air transport sector in Iraq, its policy and institutional framework, some regulatory issues; and a high-level review of the challenges faced by airports, airlines and air navigation services. Specific decisions and actions



regarding each subject have been proposed to create a favorable enabling environment that would unleash the potential of the sector, resulting in robust traffic growth, job creation, and increased private sector participation in the industry.

All recommended actions can be organized into two main categories, further divided into activities that could become a programmatic approach to air transport in Iraq.

1. Social reforms

The sectorial reforms will address the governance issues of the sector, strengthen the regulatory environment, and ensure the sustainability of the services provided.

(i) Targeted and integrated institutional reform

The institutional reform will provide sound governance of the air transport sector, through a clear leadership that addresses the needs of the various stakeholders. It will encompass the creation of a Civil Aviation Board, the drafting and approval of a new civil aviation law, a strengthened Iraqi Civil Aviation Authority (ICAA), a clear separation between service delivery and oversight, as well as removing private sector participation limitations.

(ii) Strengthened regulatory environment and planning

The reforms will unleash the potential for growth and inclusiveness of the sector, through targeted training and capacity building of authorities, and ensure sustainability through the implementation of clear and transparent funding mechanisms, through fees and charges established in line with industry best practices and the requirements of ICAO.

2. Infrastructure and service enhancement

In the short term, important investments are necessary to bridge the current safety and capacity gaps in the airport infrastructure and operations and to restructure Iraqi Airways to meet international safety standards as well as to prepare it to compete in the domestic, regional, and international markets.

(i) Safety critical and capacity infrastructure works

Execute safety critical infrastructure works and short-term capacity enhancement program (at Baghdad Airport in particular), while promoting private sector participation for longer term sustainability.

(ii) Boost private investments and spillovers in the air transport value chain

Promote private sector participation for the operation of selected infrastructure and provision of services and build a strong and competitive air transport value chain to support these.

(iii) Rebuild the air transport infrastructure and services

Restructure Iraqi Airways to bridge the current safety gaps, enhance the services provided, and prepare the carrier to compete successfully in the domestic, regional, and international markets. Identify and reopen the air transport infrastructure through effective and positive control of the aerodromes of the country as special development tools.

The execution of the recommendations of the White Paper to transform the Iraqi air transport sector along the lines presented can be carried out over a period of four years and would require an estimated budget of USD 200 million.

UZBEKISTAN Project (P171028)

The World Bank has been continuing its support to the government of Uzbekistan to reform the aviation sector under the second phase of the Reimbursable Advisory Services (RAS Phase 2) signed on 17 January 2020. The second RAS focuses on developing aviation sector policies, improving the competitiveness of the national airline, the sustainability of air transport service providers, and institutional capacity building in the sector governance. Ultimately, the reform is expected to prepare the sector to meet growing tourism demand and stimulate increased competition.

This work is a continuation of the first RAS (RAS Phase 1) completed in 2019, under which the World Bank Group (WBG) advised the Government of Uzbekistan (GoU) on introducing a modernized organizational structure of the aviation sector in line with international practices, assessed all core business areas of the national airline company and recommended business model options for the airline's sustainability, and conducted a preliminary assessment of airport PPP models in coordination with the IFC transaction advisory team. The RAS support resulted in the GoU embarking on fundamental reform in the aviation sector through the enactment of the Presidential Decree 5584 on 27 November 2018. This led to the unbundling of the previously vertically integrated monopoly National Air Company "Uzbekistan Airways", the creation of policy-making body - Ministry of Transport (MOT), and the separation of the airline from airport operations as well as from policy-making and regulatory functions. The

reform also sent an important signal to the private sector and opened PPP opportunities in Uzbekistan's airports. Through an effective partnership with IFC and GIF, a strategic advice was also provided on various options for attracting the private sector into airport modernization and operations.

The support under the second phase has been assisting the GoU in the implementation of the ongoing sector restructuring by: (i) strengthening capacities in the sector, including that of the policymaking and regulatory oversight, (ii) formulating a National Aviation Policy, (iii) enhancing the performance and sustainability of SOEs in the aviation sector in the context of the current unbundling efforts, and (vi) facilitating private sector investment in the sector. The RAS Phase 2 is structured along the components presented below:

I. Part 1 comprises required institutional and regulatory reform actions, including:

(i) Component A: Support for establishing policy-

making functions in the newly established Ministry of Transport; and

(ii) Component B: Support for strengthening the technical regulatory oversight capacity of the Civil Aviation Agency (CAA).

II. Part 2 focuses on the implementation of unbundling activities and the restructuring of State Owned Enterprises (SOEs), covering the following areas:

(i) Component C: Support for establishing and commencing operations of "Uzbekistan Airport" Joint-Stock Company and its subsidiaries;

(ii) Component D: Support for the restructuring process of "Uzbekistan Airways" Joint-Stock Company and the preparation of a detailed Business Plan; and

(iii) Component E: Support to the restructuring of "Uzbekistan Airways Technics" (UAT) LLC.



The WB air transport team has been working throughout the pandemic period on a remote basis, but during June - December 2021, the team conducted three missions to Uzbekistan:

1. In June 2021, the team carried out the first mission to Uzbekistan post-pandemic to present to the Government the draft Business Plan and a Roadmap for restructuring Uzbekistan Airways (UHY) JSC delivered by the RAS team to the GoU in April 2021, and to provide hands on support to UHY on implementation of the Business Plan's recommendations. During the mission, the team worked closely with the various technical departments and management of UHY to discuss the analysis and recommendations presented in the Business Plan and agree on the airline's new organizational structure in line with best international practice. The team also provided three training sessions to the various departments of UHY on the following: (i) training on route profitability analysis and fleet strategy to the commercial, finance, and strategy departments, (ii) training sessions on passenger handling and passenger services for the ground operations staff of UHY, and (iii) training on customer experience to the flight attendants and pilots. Following the visit, in July 2021, the team submitted the revised UHY Business Plan and Roadmap, taking into account the mission discussions and findings, which were later accepted by the Ministry of Transport and Uzbekistan Airways JSC.
2. In September 2021, the WB team conducted another technical visit to Uzbekistan, the objectives of which were to present to the Government the draft Business Plan and Roadmap for restructuring Uzbekistan Airways Technics (UAT) LLC submitted to the Ministry of Transport on 22 May 2021 and to provide hands-on support to UHY and UAT on implementation of the Business Plan's recommendations. During the mission, the team worked closely with the Technical Airworthiness Department of UHY and with technical personnel of UAT on aligning aircraft maintenance practices and staffing requirements with international standards. The team also visited the maintenance facilities of UAT, which were found to be adequate and compliant with technical requirements. Following the visit, and at the request of the Government, the RAS team prepared a technical note on the best approach for implementing some of the recommended actions with regard to the discontinuation of the on-board

mechanics service and the associated risks for the company. The team has revised the UAT Business Plan and Roadmap, taking into account the mission discussions and additional findings, and has submitted it to the GoU in June 2022. The revised Business Plan also reflects the potential impacts of the war in Ukraine and sanctions in Russia on the MRO business in general.

3. This third technical mission in 2021 took place in



December with the objective of finalizing the activities on Flights Operations (OPS) safety under the Aviation Safety Component, which included hands-on support to the Civil Aviation Agency (CAA) staff in charge of OPS certification and safety oversight to ensure compliance with ICAO requirements and recommendations of the last ICAO Audit. During the mission, the RAS team visited the CAA facilities for training OPS Inspectors, reviewed the status of implementation of the OPS Corrective Action Plan (CAP) for the elements in OPS that were non-compliant with the ICAO Safety Audit, and reviewed the implementation status of the new Flight Operations Inspector Training Manual and Flight Operations Inspector Handbook, both prepared with RAS team support. The WB also provided hands-on training to the CAA OPS staff on the practice application of the Flight Operations Inspector Handbook and on mandatory oversight of air operator certificate (AOC) holders in line with the principles of the ICAO Universal Safety Oversight Audit Program (USOAP). The main outcomes of the RAS team's support include the following: (i) the progress achieved by the CAA in implementing the OPS CAP actions with almost all findings on non-compliance with ICAO Standards and Recommended Practices (SARPs) closed; and (ii) the Flight Operations Inspector Training Manual and Flight Operations Inspector Handbook adopted and endorsed by the CAA in August and December 2021, respectively.

IATA

Guidance for Vaccine and Pharmaceutical Logistics and Distribution Edition 1 - 16 November 2020

The World Bank contributed to the International Air Transport Association's *Guidance for Vaccine and Pharmaceutical Logistics and Distribution*: a set of considerations and awareness on large-scale handling, transport, and distribution of vaccines, pharmaceuticals, life science, and medical products. A joint information sharing forum was established to facilitate and ensure industry preparedness when vaccines for COVID-19 were to be approved and available for distribution. It follows that the document revolves around planning, preparing, and looking at the global considerations as well as drawing upon lessons learned during the crisis, setting a precedent for the future, and identifying how the existing procedures can be efficiently adapted to ensure the fast and safe movement of products using a risk-based approach. The paper acknowledged that although the set of considerations are for the distribution of COVID-19 vaccines, the current capacity required for routine immunity immunizations must be protected and overall capacity expanded to accommodate COVID-19 vaccines. The document would be subject to regular review and revision as additional information and best practices are made available by the various stakeholders.

MAURITIUS

Mauritius Country Economic Memorandum (P171584)

The Mauritius Country Economic Memorandum (CEM) was approved by the World Bank on September 6, 2019 and completed on 19 March 2021. Following a high-level dissemination event with the Minister of Finance, the Central Bank governor, and their teams, the CEM report was shared with the government in its final form in March 2021. This has led to the identification of additional inputs requested by the Minister for the preparation of the 2021/22 budget, including on skills formation, labor market policy, exchange rate management, and state support. Short thematic policy notes were already prepared in April 2020, and preliminary results have been shared with key counterparts throughout the process. This has led to a number of technical follow-up engagements through which the team provided policy advice and implementation support, including the following:

(i) Continued collaboration with the Mauritius Competi-

tion Commission on critical market identification, merger control, and competition advocacy with regulators.

(ii) Collaboration with the Economic Development Board on market access and FDI strategies.

(iii) Collaboration with the Ministry of Education on early childhood education.

(iv) Discussions at the Ministry of Finance on the design and implementation of a planning function.

(v) Development of a trade data dashboard, as well as ongoing discussions with the Statistics Office to house this dashboard permanently.

(vi) Co-creation and presentation of CEM contributions to a new COVID-19 research platform in Mauritius that coordinates and facilitates exchange among academics, development partners, and the private sector on assessing COVID's impact.

BRAZIL

Brazil Infrastructure Policy Assessment (P174544)

The development objective of the Brazil Infrastructure Policy Assessment is to develop innovative and thought-provoking policy advice designed to stimulate infrastructure development in Brazil while supporting the country's COVID-19 recovery process and promoting long-term sustainable and equitable growth.

The ASA will apply cutting-edge innovative insights and new knowledge on the policy reforms needed to stimulate and sustain infrastructure development and to strategically inform and scale up policy dialogue with the Government of Brazil. Efforts will emphasize the importance of developing a resilient, sustainable, and inclusive response to Brazil's COVID-19 recovery process. Adopting a multi-year programmatic approach, this ASA will roll out a series of novel and thought-provoking policy assessments underpinned by robust quantitative and qualitative evaluations of Brazil's infrastructure sector. To accurately identify key priority areas for Brazil and to ensure options are creative yet meaningful and effective, a knowledge-exchange platform (KEP) comprising external experts, government policy assessment and development process. Finally, data resulting from these analyses will be made available in a user-friendly, accessible format.

The ASA will generate two key outputs:

(i) A policy matrix to stimulate and sustain infrastructure development while supporting Brazil's COVID-



19 recovery process and promoting medium-, to long-term, equitable, and sustainable growth.

- (ii) A series of policy and research papers—and where practical, implementation strategies, tools, comparative case studies and alternative analyses, and pilots—comprising deep dives into a select number of priority areas identified in the policy matrix.

Activities will focus on: (i) informing the government’s strategic planning process for infrastructure, (ii) identifying investment challenges and service delivery shortfalls, and (iii) assessing policy gaps and weaknesses in institutional strength and regulatory frameworks. A sequential, phased approach—whereby resources evolve and grow year after year, accompanied by continual client dialogue—will be adopted.

In February 2021, a document was prepared by an independent air transport consultant with the supervision of the World Bank team to conduct background research on recently enacted policy reforms in Brazil’s aviation sector (topics of interest include but are not limited to (i) alignment with international standards, (ii) connectivity, (iii) competitiveness, (iv) decarbonization, (v) economic growth, (vi) private sector, (vii) productivity, and (viii) regulation), and prepare technical and policy briefs. The document represented preliminary find-

ings on (i) the air transport institutional framework in Brazil, (ii) Brazil’s score under the ICAO USOAP audit results with a focus on the country’s environmental remediation plan, (iii) sectoral context, connectivity, and competition in Brazil, (iv) private sector involvement, (v) an overview of infrastructure and service delivery in the aviation sector, (vii) the impact of COVID-19, and (viii) recent policy developments in Brazil.

South Africa

The COVID-19 Pandemic and Air Transport in Southern Africa: Analyzing Airlines’ Reform and Policy Responses

The objective of this Advisory Services and Analytics (ASA) is to explore policy and operational strategies to build back a safe and competitive air transport sector in the aftermath of the COVID-19 crisis in select Southern African countries. It reviews the status of the sector in Botswana, Eswatini, Lesotho, Namibia, and South Africa by assessing the current and expected needs and by exploring various strategies and policies to guide the World Bank Group’s policy position and potential operational responses. The ASA mainly focuses on the state-owned airlines in the region and explores airlines’ reform options and policy directions to re-build an air transport sector that meets international, regional, and local demands. It builds on: (i) a recent World

Bank Policy Note which reviews pre-COVID-19 sector challenges in Africa and recommends operational and policy responses to mitigate the impact of the pandemic, and (ii) a technical paper on the impact of the pandemic on air transport connectivity in the Southern African Region.

The study thus explores salient airline restructuring and regulatory reform challenges and opportunities in the Southern African region to distil operational and policy relevant insights for a sustainable recovery. Prior to the COVID-19 pandemic crisis, the air transport sector in Africa faced multipronged challenges, including those related to economic regulation, profitability, safety, security, and sustainable financing of critical infrastructure. While the pandemic has exacerbated these challenges, it also presents opportunities to tackle some of them.

The main policy responses to the crisis and to the legacy problems of the air transport sector in the region are phased in two steps: (i) immediate policy actions for air travel recovery, and (ii) a menu to short-to-medium term actions for a competitive and safe air transport sector. The three main immediate policy directions for a faster recovery of air travel are: facilitation of market access for airlines, establishment of a common travel and cross-border control for tourism restart, and provision of direct financial aid. The list of short-to-medium term policy responses spans in eight strategic directions, which include:

1. Development of industrial policy for air transport
2. Promotion of private sector solutions
3. Liberalization of market access
4. Liberalization of foreign ownership and control
5. Provision of essential/lifeline connectivity
6. Restructuring of state-owned carriers and routes
7. Facilitation of market consolidation
8. Improvement of safety standards and oversight capacity.

LAOS

Support to Lao Airlines Corporate Governance and Fiscal Risk Review

A Virtual Concept Note review meeting for Lao Airlines Corporate Governance and Fiscal Risks Assessment prepared under the Financial Management and Accountability Umbrella was held on 24 June 2021. The meeting recognized the areas of agreement identified

by the team and provided guidance on areas of discussion. The aim of the concept note was to assess the corporate governance arrangements, operations, and fiscal sustainability of the carrier to support the nation's economic development. The tasks involved (i) assessing the corporate governance arrangements of Lao Airlines, (ii) performing a cost-benefit analysis of its operations, (iii) assessing the adequacy of the five-year recovery plan, and (iv) providing recommendations for areas of improvement. The task will build on previous World Bank support to Lao Airline in 2020 during the assets and liabilities restructuring.

The first task will provide a brief overview of the legal and regulatory framework, scope, activities and recent developments in the airline industry which includes the status of the implementation of ASEAN open skies policy and ASEAN air transport agreements. It will also analyze the strategic relevance of the airline to regional aviation market and Lao economy in general, and the implications for restructuring. It will include a detailed assessment of the impact of COVID-19 on the country's economy and passenger travel, along with an expected recovery trajectory.

The fiscal risk assessment will provide a deep dive into the macro-fiscal impact of the airline, debt, contingent liabilities, arrears, etc. The assessment will focus on the fiscal and debt trajectories of Lao Airlines, debt composition, the elasticity of its revenues to macroeconomic shocks from changes in commodity prices and COVID-19, exchange rates, and domestic and international interest rates, and their impacts on its balance sheets. Furthermore, it will include a detailed assessment of the current and future expected liquidity position of the airline and potential additional equity funding support from the government to adapt to a post-COVID-19 recovery period. It will look at transfers in terms of subsidies from the government, dividends transferred to the government, outstanding arrears, and to whom these arrears are owed (including creditors, private suppliers, inter-SOE transactions, and Government of Lao contingent liabilities).

The corporate governance assessment will analyze the governance and institutional framework, performance monitoring, procurement and contracting, value for money, business process, transparency, and accountability mechanisms of the airline. It will also assess the overall functioning of the Board of Directors as well as their appointments process, and the effectiveness of the state ownership and oversight functions. It will review the financial management system, including, budgeting

and resource allocation, accounting system and records keeping, internal controls and audit, financial reporting and compliance with international accounting standards, and asset management. The assessment will also evaluate the Human Resources management practices, policies including gender, inclusion and disability issues, and performance management system.

The five-year recovery plan review will provide an independent review of the proposed Lao Airlines Recovery Key plan and business process. This assessment will include a detailed analysis of (i) strengths and weaknesses of the airline vs. competition with benchmarking of key metrics, (ii) fleet plan of the airline, including any planned renewal to newer, more fuel efficient aircraft as well as optimization of the overall fleet, especially given the impact of COVID-19, (iii) suitability of fleet composition to the market and operating environment, (iv) requirement and plan for employee optimizations, (v) plans to update business model including systems & processes, technology, aircraft maintenance etc. it will also provide an in-depth operational profitability analysis of the carrier in the context of the current and expected future realities of the airline industry and other local market conditions in Laos such as the development of the hi-speed railway.

South Africa

COVID-19 and Air Transport: Analyzing Policy and Operational Responses for Quicker Economic Recovery in Selected SA Countries (P176752)

The objective of this Advisory Services and Analytics (ASA) is to review the status of the aviation sector in Namibia, Botswana, and South Africa by assessing the current and expected needs and by exploring various strategies and policies that ultimately guide the World Bank Group's policy position and potential operational responses. The ASA will undertake the following five main activities:

- (i) Analyze the air transport connectivity landscape in Africa pre-COVID-19 crisis with a focus on challenges affecting the sector such as connectivity gaps, cost structures and the impediments of public / private sector interventions.
- (ii) Assess the impact of the COVID-19 pandemic on air transport connectivity in the Southern African region.
- (iii) Proposes airlines restructuring options relevant for the Southern African region.

- (iv) Prepare a menu of policy and operational recommendations for the World Bank Group on the air transport sector as part of recovery response.
- (v) Carry out consultation with key stakeholder in key CMU countries to provide just-in time support and events (webinars) on the fast-changing impacts of COVID-19 on the sector.

In sum, the ASA will explore strategies to build back a safe, secure, and competitive air transport sector, focusing on the following high level policy and operational questions:

- (i) In the current environment, under what conditions would the private sector consider it feasible to participate in different segments of the air transport market (international, regional, local) if relevant legal regimes allowed such participation alongside or in replacement of the purely public model (such as state-owned national carriers)?
- (ii) What are the barriers to private sector participation in the aviation sector?
- (iii) Under what conditions can public funding of airlines and airports be justified, in the context of fiscal pressure faced by countries in a post-COVID economic environment? In particular, where would public funding be more suitable across the value-chain (e.g., safety and security systems, cargo handling infrastructure, etc.) in a constrained fiscal space?
- (iv) What are alternative approaches that would safeguard basic connectivity for isolated low-income countries?
- (v) Identify opportunities that could exist for regional cooperation and assess how such regional cooperation could be structured. What roles can regional entities (e.g., SADC, ECOWAS, COMESA, etc.) play for harmonization and optimization of air routes?
- (vi) What potential aviation models could exist for regional cooperation?
- (vii) What should be the role of development partners like the World Bank Group?

KENYA

Kenya Aviation Outlook (P175686)

The Government of Kenya (GoK) acknowledges the following top priorities to further develop air transport: (i) the need for a national policy to guide the sector development, (ii) validation of its National Airport Master Plan capacity expansion requirements and implementation strategy, (iii) strengthening and enhancing security at major airports, and (iv) improving its aviation oversight capacity, including human capital. The scope of the analytical work was limited to examining the potential implications of a proposed publicly owned Kenya Aviation Holding Company governance structure, accountabilities, and debt management obligations as part of a sector-wide restructuring. This narrow focus was driven by the absence of an aviation policy for Kenya and a 2020 proposal to Parliament for consolidating national aviation assets and financial interests, including renationalization of a debt-ridden national airline and merger with a commercially profitable SOE airport operator.

The ASA informed how the World Bank Group can rationalize its support to Kenya's public service obligations for safe and secure aviation systems, including relevant international airport investments constrained by the disruption in sector revenues, while providing an engagement roadmap predicated on institutional arrangements that ensure a transparent and accountable governance framework for the air transport sector.

The ASA enabled the World Bank to concurrently evaluate and provide informed feedback on the implications of the proposed policy positions expected to guide the sector restructuring process, and the degree to which public sector financing must be substituted for private sector participation in the near-term due to current exceptional circumstances. The decision by Parliament on consolidating multiple operational aviation assets into one State-Owned Enterprise (SOE) faced serious opposition from key sector political, business and union stakeholders thereby halting its implementation in 2021.

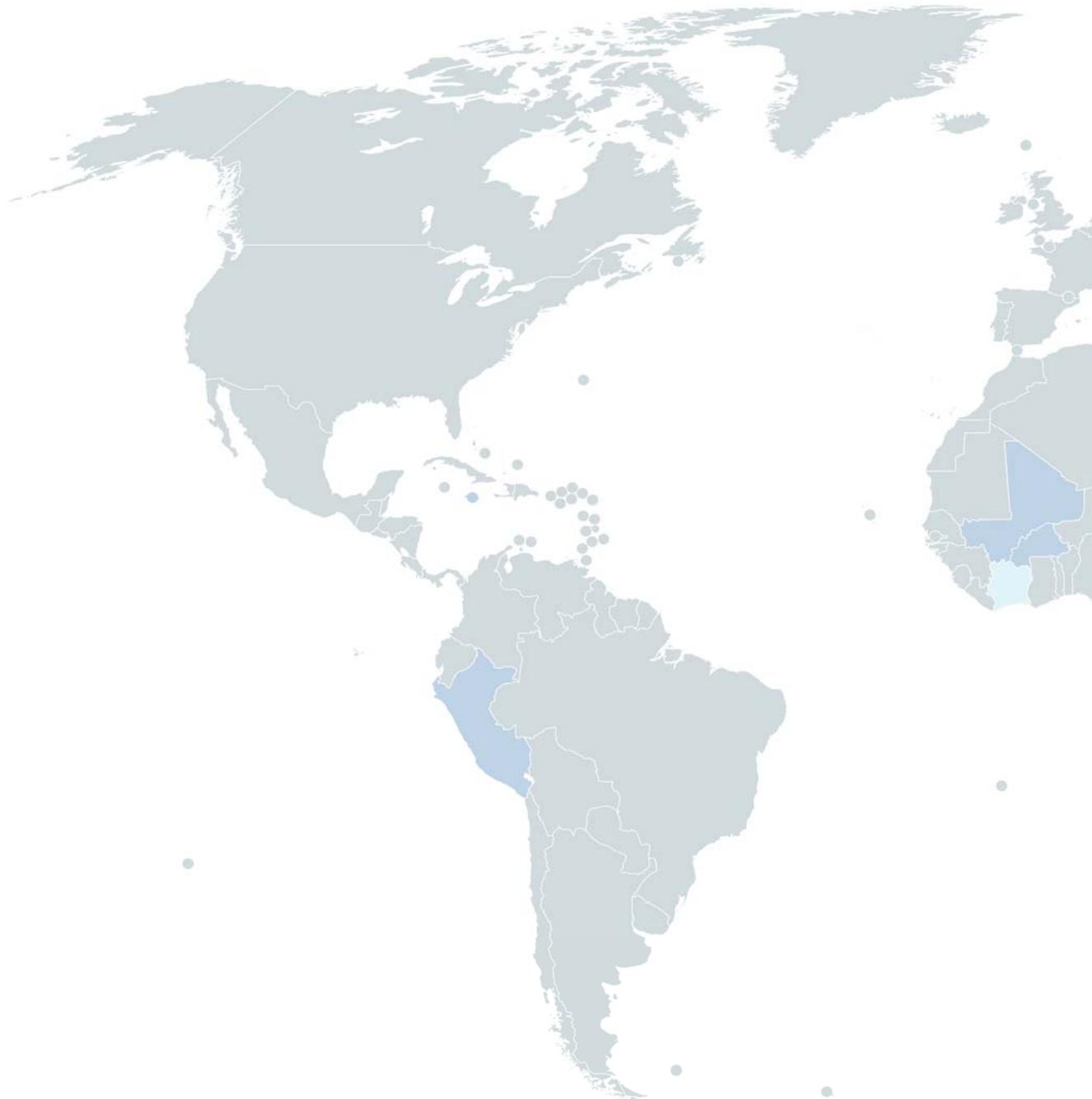


IFC PROJECTS

IFC AIR TRANSPORT PROJECTS: The IFC provides financing to private sector companies and has traditionally financed air carriers and airport infrastructure projects.

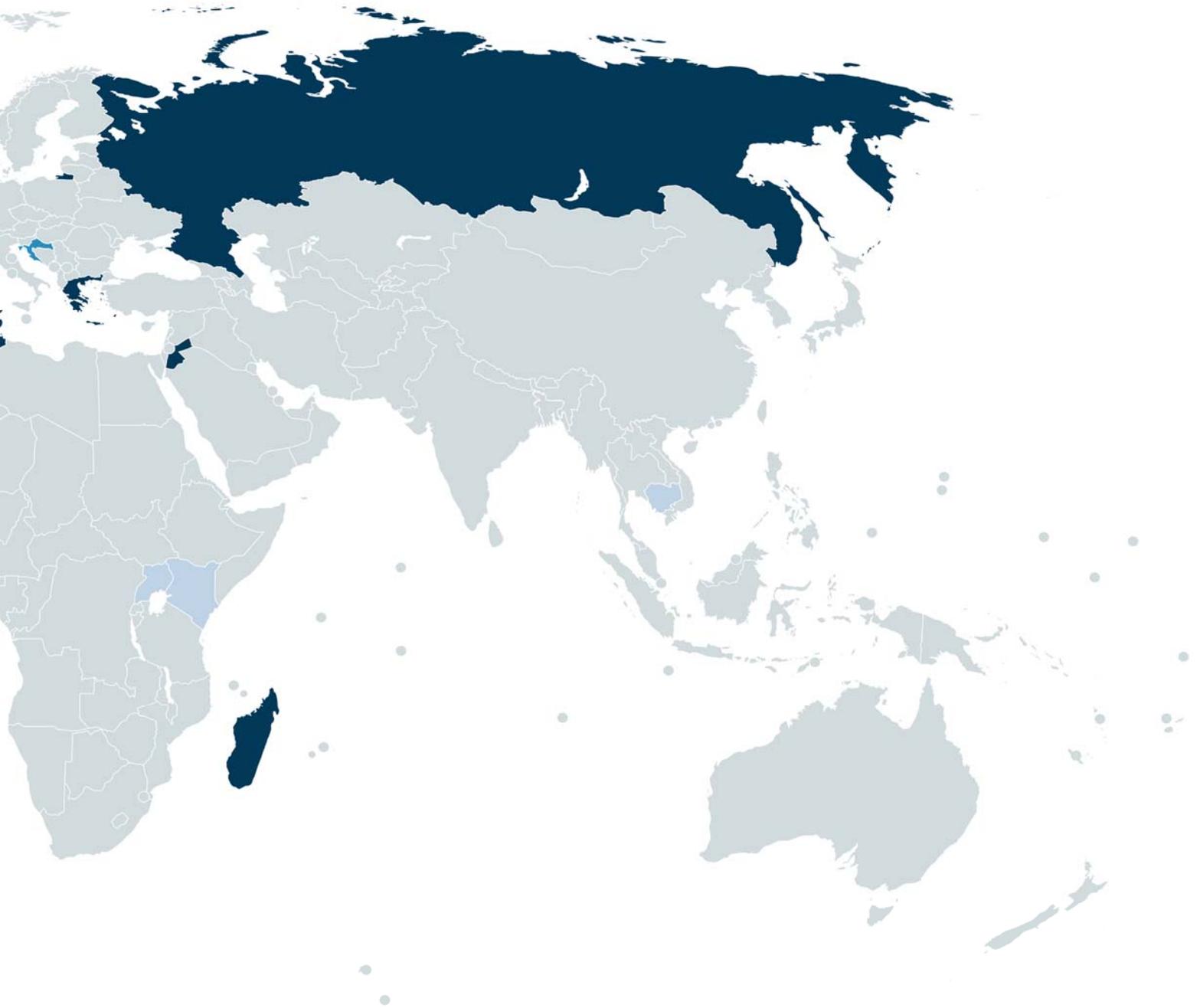
IFC ACTIVE AVIATION PORTFOLIO: Major active projects financed by the International Finance Corporation (IFC) include Sofia Airport in Bulgaria, Queen Alia Airport in Jordan, the Zagreb Airport in Croatia, the Enfidha Airport construction in Tunisia, as well as Belgrade Airport in Serbia. In addition, the IFC investment portfolio also includes Lima Airport in Peru and the 14 Regional Airports in Greece.

In addition, IFC is active through the provision of Advisory Services for Kingston Airport (Jamaica), the Saudi Airports (26 in total), Sofia Airport (Bulgaria), Podgorica and Tivat (Montenegro), Beirut Airport (Lebanon) and Clark Airport (Philippines).



IFC Commitment

- US\$1 to \$10 Million
- US\$10 to \$30 Million
- US\$30 to \$50 Million
- > US\$50 Million



IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of end of FY2021) USD*	TYPE
Jordan	26182, 34536, 26864, 26685	Queen Alia International Airport: Rehabilitation of both airside and landside facilities	USD 295 million; USD 148.4 million for IFC's own account	USD 107.3 million in loans, and USD 6.6 million in swaps	IFC A Loan USD 141.2 million; USD 160 million B Loan (26182) and (34536) IFC Client Risk Management - Cross Currency Swaps (26864, 26685)
Kenya ¹	31650	KQ Airways: Expansion program consisting of the acquisition of 9 Boeing 787 Dreamliner aircrafts and 10 Embraer 190 aircrafts	USD 25 million	USD 19.4 million	Equity
Peru ²	24489	Lima Airports Partnership: Financial restructuring and assistance in conjunction with Fraport	USD 20 million	USD 13.4 million	Equity
Tunisia ³	26913	TAV Tunis Equity: Construction of a new airport in Enfidha, with an initial capacity of 7 million passengers per year, and rehabilitation of the airport in Monastir	USD 253 million; USD 184 million for IFC's own account	USD 34.6 million in loans	IFC A Loan, Subordinated Loan, Syndicated B Loan, Equity

1. Equity for all projects is expressed at the cost of acquisition.
2. Equity for all projects is expressed at the cost of acquisition.
3. Note that the equity portion was sold, so the only remaining balance is USD 34 million of dept.

IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of end of FY2020) USD*	TYPE
Croatia ⁴	31969, 34380	Zagreb Airport: Construction and operation of a new passenger terminal and related infrastructure at Zagreb Airport and the existing facilities.	USD 72.65 million for IFC's own account (31969)	USD 3.4 million in loans and USD 14.4 million in equity	A Loan, Equity, and C Loan (31969)
Greece	37655	Greek Airports (Infrastructure services upgrade at 7 airports)	USD 97.4 million A Loan and USD 3.8 million swap (Commitment in Euros)	USD 101.8 million in loans and USD 7.5 million in guarantees	A Loan and Client Risk Management
	38905	Greek Airports B (Modernization of 7 additional airports in key Greek islands)	USD 65.9 million A Loan and USD 2.8 million swap (Commitment in Euros)	USD 70.8 million in loans and USD 5.0 million in guarantees	A Loan and Client Risk Management
Madagascar	36882	FCS RE-Ravinala: Upgrade and expansion of the two international airports of the country, with the help of the Emerging Africa Infrastructure Fund.	USD 43.5 million A Loan, USD 109.4 million Parallel Loan and USD 71.3 million MIGA Guarantee	USD 27.8 million in loans and USD 7.7 million in guarantees	A Loan, Parallel Loan and MIGA Guarantee
Serbia	41123	Belgrade Airport: Capacity increase and upfront concession fee for the airports authority	EUR 72 million A Loan for IFC's own account plus EUR 110 million B Loan	USD 66.3 million in loans	A Loan and B Loan

4. Equity for all projects is expressed at the cost of acquisition.

IFC PROJECTS

COUNTRY	PROJECT CODE	DESCRIPTION	AMOUNT (USD)	IFC'S EXPOSURE (as of end of FY2020) USD*	TYPE
Bulgaria*	25713	Sofia Airport: Financing capex for modernization and upgrade of airport's infrastructure, and concession fees	EUR 30 million A Loan for IFC's own account	USD 11.9 million in loans	A Loan
Philippines*	44179	Agila (Cebu Pacific): The financing will provide Cebu Pacific with a longer liquidity runway to help the company withstand the effects of the COVID-19 pandemic until economic activity and travel demand recover	USD 125 million for IFC and IFC AMC Emerging Asia Fund, Indigo Partners for USD 125 million, for a USD 250 million	USD 62.5 million in quasi-loan	Quasi-loan (convertible bond)

*New Investment

IFC: PROJECT HIGHLIGHTS

PHILIPPINES

Agila - Cebu Pacific Project (P44179)

A leading player in the Philippine aviation industry for 25 years, Cebu Pacific is the largest airline in the country, providing low-cost air transport services within the Philippines, as well as to the rest of Asia and the Middle East. In FY2021, IFC, the IFC Emerging Asia Fund, a private equity fund managed by the IFC AMC, and Indigo Partners, a private equity fund managed by the IFC AMS, and Indigo Partners, a private equity firm focused on air transport investments, invested USD 250 million in Cebu Pacific in the form of convertible bonds. Affordable air travel is essential to continued growth in the Philippines, an archipelago nation of over 7,000 islands, that is deeply dependent on tourism (~12.7 percent of GDP in 2019). Closed in early 2021, the investment will provide Cebu Pacific with a longer liquidity runway to help the company withstand the effects of the COVID-19 pandemic until economic activity and travel demand recover. IFC played a key role in mobilizing Indigo, a globally experienced third party investor and strategic partner.

BULGARIA

Sofia Airport Project (P25713)

In 2020, SOF Connect signed a 35-year concession with Bulgaria's Ministry of Transport, Infrastructure, Information Technology and Comms to expand, operate and maintain Sofia Airport. The project company is owned by Meridiam and Strabag and supported by Munich Airport as a third-party operator.

In FY2021, IFC committed a EUR 30 million loan to modernize and upgrade the airport's infrastructure, including refurbishing and optimizing terminal facilities, as part of a total EUR 480 million project cost. As the lead advisor, IFC's CTA department helped the government design a competitive, transparent tender for this Public-Private Partnership (PPP) - the first major PPP in Bulgaria in a decade. IFC's funding will go towards the upfront concession fee, refurbishment and optimization of the existing terminal facilities and aircraft gates to boost efficiency and provide quality passenger services and commercial offerings, among others. Closed in early 2021, this project was one of the first major airport sector transactions to close in the region since the onset of COVID-19.



IFC: PROJECT HIGHLIGHTS

SERBIA Belgrade Airport Project (P41123)

In 2018, Vinci Airports won a 25-year concession for the upgrade, expansion, operation and maintenance of Belgrade's Nikola Tesla Airport. In FY2019, IFC committed a EUR 182 million financing package for the airport's development, including a EUR 72 million senior loan for its own account and EUR 110 million in mobilized funds from six commercial banks as part of a total EUR 420 million project cost. Well-managed airports are economic engines that connect people and goods to spur regional growth. As Serbia's main hub, Belgrade Airport received 5.6 million passengers in 2018 and is set to nearly triple its capacity by the end of the concession. The airport's upgrades and operations are expected to generate ~41,000 indirect jobs, enhance regional economic integration and unlock the country's tourism potential. The concessionaire transferred a EUR 501 million upfront concession fee to the government and will invest EUR 400 million to upgrade the airport. The fiscal benefit of the upfront fee would be equivalent to 1.4 percent of Serbia's annual GDP in 2017. This is Serbia's first infrastructure PPP and the transaction has the potential for a strong demonstration effect in the region.

CROATIA Zagreb Airport Project (P31969)

The IFC is supporting the development of a terminal at Zagreb International Airport as part of a Public Private Partnership (PPP). The new USD 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 USD 72.65 million to the project, including a loan of up to USD 47 million and an equity investment of nearly USD 26 million. The concession includes financing, design, and construction of the terminal, along with airport operations until 2042.

The new terminal is 65,000 square meters and has welcomed 5 million travelers per year since it opened in March 2017, compared to its previous capacity of 2 million. An average of 400 new jobs were created during construction, and up to 700 at its 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.



IFC: PROJECT HIGHLIGHTS



MADAGASCAR **Airports in Nosy Be and Antananarivo** **Project (P36882)**

In FY2017, IFC approved the project for airports in Madagascar. The project consists of a 28-year Design, Build, Finance, Operate and Transfer (DBFO) concession to rehabilitate, upgrade, expand, operate and maintain the two largest airports in Madagascar: Ivato Airport, serving the capital city of Antananarivo, and Fascene Airport, located on the island of Nosy Be, the country's busiest tourist destination. The concession was awarded through an international competitive tender to Ravinala Airports. The Project Company's shares will be owned by four reputable investors, three of whom are existing IFC clients. It represented an opportunity for IFC to invest in one of the poorest countries in the world. The investment aimed to expand the airports' capacity while they remained operational.

PERU **Lima Airport** **Project (P24489)**

In FY2017, IFC approved the Lima Airport equity investment. It was for a 19.99 percent stake for USD 20 million. At the time IFC considered the investment,

Lima Airport Partners S.L.R. (LAP) had a 30-year concession to operate the Jorge Chavez International Airport (JCIA) in Lima, Peru. The concession term can be extended to 40 years at LAP's option and to 60 years by mutual agreement between LAP and the government of Peru. JCIA is the only commercial airport serving Lima and is Peru's primary international airport, operating on a 24-hour schedule. It was, and remains, the principal hub in one of Latin America's best performing economies and enabled the transfer of control from a shareholder (Singapore Airport/Bechtel) to a strategic investor and airport operator (Fraport AG), committed to the airport's expansion and increased efficiency.

Fraport AG Frankfurt Airport Services Worldwide (Fraport) owns and operates Frankfurt Airport in Germany, the seventh largest airport in the world and the second largest airport in Europe. Fraport's management was meant to add airport operation and management know-how and result in an upgrading of the skills of the local workforce. MIGA also provided Fraport with a guarantee for USD 11.5 million, to cover its USD 12.8 million counter guarantee for a performance bond posted for the privatization of Lima's airport.

IFC: PROJECT HIGHLIGHTS

TUNISIA

Enfidha Airport Construction Project (P26913)

In FY2018, IFC arranged a full financing package of EURO 135 million from IFC's own account and a EURO 255 million syndicated loan, underwritten by ABN, Société Générale, and Standard Bank. This was also to rehabilitate the existing airport at Monastir and operate bot under a 40-year concession. The airports were set to serve major tourism areas around the towns of Monastir, Sousse and Hammamet on the Mediterranean Coast. This was the first PPP in the air transport sector in Tunisia and more broadly, in North Africa.

Contact persons for all IFC Investment projects is Maria Lopez Conde at mlopezconde@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 4.1 billion in 2017, 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.

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 percent of the cost base (up from 15-20 percent 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
Manas Airport	Kyrgyzstan	2022-ongoing	Due Diligence
Jakarta Airport	Indonesia	2020-ongoing	Due Diligence
Dili Airport	East Timor	2020-ongoing	Due Diligence
Grantley Adams Airport	Barbados	2019-ongoing	RFQ completed
Montenegro Airports	Montenegro	2018-ongoing	RFQ completed
Beirut Airport	Lebanon	2018-ongoing	Government approval stage
Madinah Airport	Saudi Arabia	2021	Restructuring support completed
Sofia Airport	Bulgaria	2017-2020	Successfully awarded to Munich Airport, Meridiam and Strabag consortium
Nepal Airports	Nepal	2016-2019	Strategic Assessment
Clark Airport	Philippines	2018	Awarded to Changi led consortium
Norman Manley Airport	Jamaica	2018	Awarded to GAP led consortium
Samoa Airline JV	Samoa	2017	JV Options Analysis
Jacksons Airport	Papua New Guinea	2017	Strategic Options Analysis
Jeddah Airport	Saudi Arabia	2016	Due Diligence / Project Structuring / Tender process
Taif Airport	Saudi Arabia	2016	Due Diligence / Project Structuring
Saint Lucia Airport	Saint Lucia	2016	Due Diligence / Project Structuring
Croatia Airlines	Croatia	2015	Strategic Partnership analysis
Brazilian Airports	Brazil	2014	Galeao and Confins Airports successfully awarded to Changi and Zurich Airport led consortiums respectively
Dili Airports	East Timor	2014	Feasibility Study Completed
Madinah Airport	Saudi Arabia	2012	Successfully awarded to TAV, Saudi Oger, Al Rajhi consortium
Male Airport	Maldives	2010	Successfully awarded to MAHB - GMR
Queen Alia Airport	Jordan	2007	Successfully awarded to Aeroports de Paris, ADIC, J&P, Noor consortium
Hajj Terminal	Saudi Arabia	2007	Successfully awarded to Saudi Bin Laden Group, Aeroports de Paris consortium
Abuja Airport	Nigeria	2006	Successfully awarded to Abuja Gate-way consortium (Airport Authority and equity partners)
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
Air Tanzania	Tanzania	2002	49% sold to SAA
Kenya Airways	Kenya	1996	76% sold to KLM, financial investors

ADVISORY MANDATE EXAMPLE: SAUDI ARABIA



IFC PPP Transaction Advisory Services (IFC PPP Advisory) acted as Lead Transaction Advisor in 2009-2011 to introduce private sector participation at Madinah International Airport in the Kingdom of Saudi Arabia (Madinah Airport), and a 25-year Build-Transfer-Operate (BTO) concession agreement was signed in 2011 between the General Authority of Civil Aviation (GACA) and the winning consortium comprised of TAV Airports, Saudi Oger and Al Rajhi (together the “Tibah” consortium). Madinah Airport was the first airport outside the US to achieve top level environmental / sustainability design and operational certification (LEED Gold) with IFC driven requirements, thanks to numerous sustainability measures incorporated into the design, in addition to the significant development impact through continued high level service provision to pilgrims. Since its completion, the PPP concession was operating successfully with both the concessionaire and GACA satisfied with its financial performance which provided close to 55 percent of gross annual revenue share to the Government of Saudi Arabia (GoS).

In the context of the Covid-19 pandemic, the GoS imposed air traffic suspensions in March 2020, resulting in a significant drop in passenger throughput in all airports in the Kingdom. Madinah Airport suffered an extremely critical drop in passenger throughput of over 70 percent compared to 2019, which hindered the concessionaire’s ability to perform its obligations under the concession and financing agreements.

In October 2021, GACA mandated IFC PPP Advisory support to restructure the Madinah Airport concession, and achieve a satisfactory rebalancing of the concession contract. This was based on IFC knowledge of the asset, a strong track record in structuring airport PPPs globally and a longstanding strategic relationship.

IFC’s advice enabled GACA to preserve the concession and a flagship PPP for the country by negotiating an agreement with the concessionaire which allows for a range of temporary and longer-term adjustments to the existing concession contract which relate to financial and operational matters. The rebalancing provided for a successful restructuring of debt amounting to SAR2.5 billion (CAD 680m) and a fresh equity injection of around SAR1.6 billion (CAD 430m), resulting in a total mobilization of CAD 1.1bn. This mandate was a first of its kind for IFC in terms of delivering targeted Covid 19-related advisory in a distressed situation, with a potential to be replicated in other markets.

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 an important share of the agency's portfolio. Infrastructure development is an important priority for MIGA given the estimated need for USD 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. MIGA is currently involved in two aviation projects: the Queen Alia International Airport in Jordan and the Ravalala Airports in Madagascar.

JORDAN: Queen Alia International Airport

On 30 March 2018, MIGA agreed to issue guarantees of up to USD 195,154,839 to Meridiam Eastern Europe Investments 2 SAS (Meridiam) of France for its equity/quasi-equity investment into Airport International Group (AIG), the current concessionaire of the Queen Alia International Airport (QAIA) in Jordan. The guarantees are issued for a period of up to 15 years against the risks of Transfer Restriction, Expropriation, War and Civil Disturbance and Breach of Contract.

The project consists of the acquisition by Meridiam of a 32 percent stake in AIG, which en-



tered a 25-year concession agreement with the Government of Jordan (GoJ) in 2007 to rehabilitate, expand and operate QAIA with the possibility to extend the concession by an additional 5 years (until 2037).

The proposed investment by Meridiam will enable capital expenditures to be directed towards optimizing the commercial activities of Jordan's principal airport (e.g., duty free shopping, specialty retail, food and beverages) which is expected to lead to higher non-aeronautical revenues, thereby generating additional revenues for Jordan over the duration of the REOA while enhancing the passengers' travel and retail shopping experience. The airport is an important infrastructure asset for Jordan, used by over 7 million passengers in 2017, supporting the country's economic growth and development, notably through the tourism sector. The acquisition is expected to reinforce the role of QAIA, consistent with the Jordan Economic Growth Plan spanning 2018-2022. The acquisition will support existing and new direct employment opportunities at QAIA, as well as indirect employment by domestic suppliers and service providers.

MADAGASCAR: Ravalala Airports

On 29 May 2017, MIGA issued a USD85 million guarantee covering equity and shareholder loan investments by Aéroports de Paris Management S.A, Bouygues Bâtiment International S.A.S., Colas S.A. and Meridiam Infrastructure Africa Fund, Meridiam Infrastructure Africa Parallel Fund FIPS, Meridiam Infrastructure Africa Parallel Fund SCsp into Ravalala Airports S.A. in Madagascar. The coverage is for a period of up to 15 years against the risks of transfer restriction, expropriation, war and civil disturbance, and breach of contract.

The project consists of the financing, rehabilitation/ expansion, operation and maintenance of the Ivato airport in Antananarivo and the Fatsena airport in Nosy Be, currently being managed by the state-owned enterprise Aéroports De Madagascar (ADEMA). Works include (i) works at Ivato in preparation of the Francophonie summit (expansion of apron and presidential pavilion as well as establishment

of a dedicated process path in the existing terminal for arriving/departing delegations), to be held in Antananarivo (the country's capital) at the end of November, (ii) construction of a new passenger terminal at Ivato airport and limited refurbishment works in the existing terminal, (iii) renovation of the runway and Tarmac II to host aircrafts Code E and one Code F at Ivato, (iv) renovation of the runway and limited expansion of the current passenger terminal at Fascene airport, and (v) rehabilitation of landside facilities at both airports. This includes the construction of new wastewater treatment plants, improvement of the existing incinerator at Fascene airport to meet emission standards, improvement of surface water drainage, construction of a new waste water treatment plant and installation of an oil water separator at Ivato airport.

The project's major expected development impact is to help upgrade and improve Madagascar's most important international and local gateways by implementing much needed investment, delivering better services and offering more efficient air travel options. It will thus contribute to facilitate tourism, a key sector to unlock economic growth in the country, as well as help develop linked economic activities and create jobs. The project is also expected to

have a significant demonstration effect for investors into the country, as well as providing a platform for the implementation of further public-private partnerships.

MIGA's proposed support for this investment is aligned with the Agency's priorities of supporting investments into countries eligible for financing from the International Development Association (IDA) as well as conflict-affected states (FCS). It is also aligned with the 2015 World Bank Group Systematic Country Diagnostic (SCD) for Madagascar, which emphasizes the importance of unleashing private sector potential and the financing of high impact investments in the country.

Contact persons for MIGA portfolio information is Susan Josefina Vasquez at svasquezplascenci@worldbank.org



AIR TRANSPORT SOLUTIONS AREA (AVSA)

CENTRAL AMERICA

Facilitating the Movement of Goods and Passengers by Air: Liberalization and Integration of Air Services in Central America

In February 2021, the World Bank team produced a study titled *Facilitating the Movement of Goods and Passengers by Air: Liberalization and Integration of Air Services in Central America*. The objective of the consultancy was to advise policy makers in Central America about possible policy reform measures in order to increase connectivity, affordability, and accessibility to intraregional air services for passengers and cargo, as a conduit to reignite economic activity in the region. Throughout the study, the following countries were considered as "Region" or "Central America": Panama, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic.



In the production of the study, the consultancy (i) reviewed ASAs in the region and document advances made in traffic rights liberalization and air services market integration (including ownership provisions in ASAs and national legislation) in the region, for cargo and passengers, (ii) conducted a brief market analysis on the basis of supply and demand side sources, (iii) conducted a benchmarking of infrastructure costs (e.g., airport charges) in the region, (iv) conducted a benchmarking analy-

sis of fares and air cargo rates within the region and (v) performed market consultations with key stakeholders (e.g., airlines, airports, CAAs, hospitality industry, shippers and importers, infrastructure operators, and other government agencies, etc.).

The study focused on identifying if airfare costs within the Central American Region are indeed higher than those of other regions. The rate comparison study validates the assumption that the region suffers from a deficiency in the economic accessibility of air services. The study is also intended to identify the causes of these high costs that affect connectivity. An analysis was carried out on the role that regulations on access to markets could have as a conditioning factor on the levels of competition. An analysis of bilateral and multilateral air services agreements in force in the region was carried out to understand what traffic rights are granted between the countries of Central America and to determine if there are barriers that could restrict access to markets. A comparative analysis of the costs for the use of the infrastructure in the main airports of the region was also carried out, the objective of which was to understand if airport charges are too high in Central America, compared to those charged at relevant airports in South America. Based on all the conducted analyses, the conclusions on the different factors that could be affecting the region's competitiveness were detailed at the end of the study, followed by policy recommendations aiming to improve the competitiveness of the sector in Central American countries.

From the comparison of average airfares on the main international intra-regional routes in Central America with respect to the main routes in South America, the study concluded that flying within Central America is effectively three times the cost of tickets in South America. Over the last eight years, the yield analysis (average revenue per passenger-kilometer) revealed that the values are up to 80% more expensive than in South America. Air service

agreements in the region were also analyzed to assess the level of market access, seeking to identify whether prices could be due to a lack of competition due to regulatory conditions. However, bilateral agreements do not constitute a limitation on the entry of new operators or on the increase in capacity offered. The vast majority of routes (17 of the 20 most important routes) are operated by no more than three airlines (Copa and Avianca are present on 18 of the 20 routes). On the other hand, there was a noticeable lack of Low Cost Carriers (LCCs) operating these routes. The entry of LCCs into the region would imply a substantial decrease in travel costs, which would generate a reaction from traditional airlines, driving the entire market towards a drop in airfare prices.

The study also concluded that the restrictions to competition derive from high structural costs (fees and taxes) in a limited market context, at the same time fragmented into a large number of capitals with low volumes of demand per city and relatively low levels of economic development. This implies few economies of scale in traffic volumes between pairs of cities, with high operating costs that do not correspond to the purchasing power of a large part of the population. In this scenario, the conditions for the entry of

LCCs are not met. High airport fees and taxes, both for passengers and airlines, as well as high fuel prices, constitute the main disincentives for the entry of LCCs.

The study then concludes that the cost of airport infrastructure and tax burdens, alongside fuel prices (which in themselves include taxes), are the main factors that make air transport more expensive in the region. Demand elasticity levels within Central America are expected to be significant, and the entry of competitively priced LCCs, with the consequent reaction of traditional airlines, would create a significant increase in traffic volumes. The implementation of a special airport tax was proposed as part of the recommendations for flights within the Central America region. This would be a "regional tax," which would imply a significant discount with respect to the international tax that currently applies to all international flights. This measure would then be accompanied by a reduction in the tax burden affecting the sector. Passenger charges are today taxed with all kinds of taxes. Outside the region, other countries, such as Columbia reduced their VAT rates from 19 percent to 5 percent, as incentive measures for the sector, including aeronautical supplies. Measures of this nature would generate a significant reaction in demand levels, offsetting the drop in the tax rate.

GUATEMALA

Guatemala Transport Infrastructure Sector Assessment (P174971)

The Guatemala and Transport Infrastructure Sector Assessment's development goal is to prepare an in-depth diagnostic of Guatemala's transportation sector to (i) inform government strategic planning for the sector, (ii) identify critical investment gaps and service delivery shortfalls, (iii) identify opportunities to optimize resource allocation and private financing, and (iv) pinpoint policy gaps and weaknesses in the institutional and regulatory framework. The study examines the various ways in which transportation contributes to Guatemala's economic growth and development. First, it looks at the country's context, followed by an assessment of the different transport modes and their governance and financing issues. A chapter dedicated to Public-Private Partnerships provides some recommendations as one of the options to mobilize private finance for development. It concludes with a roadmap of policy recommendations.



The analysis is based on the Infrastructure Sector Assessment Program 2.0 (InfraSAP 2.0). It follows a standardized approach structured around a set of questions and quantitative indicators. The assessment draws upon a global infrastructure database to allow cross-country benchmarking. The methodology uses spatial information on access and quality of transport infrastructure and services at the national and subnational levels to identify critical investment gaps and service delivery shortfalls; opportunities to optimize resource allocation; and pinpoint policy gaps and weaknesses in the institutional and regulatory framework. It is supported by the best available information, stakeholder consultations, and lessons learned from World Bank operations and analytical reports, including other InfraSAPs.

A series of high-level recommendations are presented as a roadmap. They are gathered into three pillars covering governance and funding, mode-specific, and cross-cutting issues. As much as possible, the recommendations are developed with some level of granularity, based on the literature review and the international experience. In other cases, the objective is to identify areas where further analysis, beyond the scope of InfraSAP 2.0, would be needed to develop customized solutions.

Key findings regarding the air transport sector are as follows:

- (i) Guatemala has a higher airport connectivity level than some of its peers. Air transport services are less efficient, as per the World Economic Forum (WEF) 2019. The National Airport Network includes two international airports: La Aurora International Airport (LAIA) located in Guatemala City and Mundo Maya International Airport (MMIA) located in Santa Elena, Peten. They are complemented by a set of national aerodromes. The airport network does not behave like a system as there is no regular domestic interconnectivity. LAIA caters to approximately 95 percent of the system's passengers (about three million) and all cargo (54,000 tons in 2019). Tariffs and taxes collected by the Customs Administration account for 14 percent (on an annual basis) of total trade collection. Modernization Project is to be developed through a public-private partnership (PPP) scheme. The pre-feasibility studies identified some issues on the "air side" in relation to the ap-

plicable international regulations and standards, that may affect operational safety.

- (ii) There is no civil aviation law that allows airport autonomy and promotes self-sustainable management. The sector does not have a plan to guide it either. The airport operations are managed by the General Directorate for Civil Aviation for the two international airports: La Aurora and Mundo Maya.

Recommendations in the air transport sector emphasize the need to improve the efficiency of air transport services and the quality of infrastructure through:

- (i) Development of a comprehensive analysis of the sector that considers the possible interrelation and complementarity between the different airports of the national airport network of Guatemala.
- (ii) Development of a general airport sector road map that includes specific actions related to regulation, safety, structural reforms, and management.
- (iii) Establishment of a specific road map for the development of infrastructure and improvement of current services for each airport.
- (iv) Improvement of the infrastructure, level of services, and operational safety conditions at La Aurora International Airport. Studies carried out by the National Agency of Alliances for the Development of Economic Infrastructure (ANADIE) have identified some issues with the "airside" in relation to the applicable international regulations and standards and the "landside" that limit the potential for both passenger and cargo segments.

WORLD BANK WEBINAR

The Role of General Aviation in Responding to Natural Disasters (17 December 2020)

General Aviation (GA) is often associated with wealthy private or corporate operators, which do not contribute significantly to economic development by establishing connectivity. However, besides traditionally playing an important role in providing new pilots that graduate to airlines, GA can also fulfill a crucial role following natural disasters.

In October and November 2020, two devastating hurricanes, Eta and Iota, hit Central America. The relentless rain and winds of the hurricanes downed dozens of bridges and damaged more than 1,4000 roads in the region. The hurricanes affected more than five



million people, at least 1.5 million of them children, creating a humanitarian emergency. While the authorities responded by mobilizing their Armed Forces, most Central American countries lack sufficient air transport capacity to rapidly deploy urgently needed medical and food supplies.

In Guatemala, where there is a strong GA community with numerous private aircraft and helicopters, GA is engaged to provide crucial support. Following the natural disaster caused by the two hurricanes, the Aeroclub of Guatemala mobilized its members to fly hundreds of relief missions in Guatemala. This rapid response was well coordinated with the authorities, and the Aeroclub also identified key donors who supported the operation.

The objective of the webinar was to outline the key role that can be played by GA in developing or emerging countries. Furthermore, planning for support by GA in the case of natural disasters, which includes coordination and agreement with the authorities, should be included in disaster response planning.

WORLD BANK WEBINAR

The Role of Sustainable Aviation Fuel in Decarbonizing Aviation (23 November 2021)

Despite the impact of COVID-19 Pandemic on avia-

tion activities, total CO₂ emissions combustion in 2050 will be between 1340 and 1660 million ton of CO₂ (and 1570 to 1945 million ton when accounting for jet fuel lifecycle emissions). If no additional actions to decrease the carbon intensity of aviation beyond historical efficiency increases are taken, this will be an increase by 38 to 71 percent compared to 2019 level.

Studies show that Sustainable Aviation Fuels (SAF) are the most feasible option to decarbonize air travel globally for the next 15-20 years. They will have to play a major role if the aviation sector is to meet its climate goals. However, to date, commercialization has been slow and current policies have proved inadequate to accelerate widespread deployment of various technologies currently available. The webinar provided an in-depth look at challenges and opportunities for commercialization of SAF technologies, as well as emerging trends in research and development.

The webinar was based on an ongoing research paper which assesses and quantifies the decarbonization options for global aviation out to the year 2050, and it accounts for a basket of measures: (1) for technological improvements to the aircraft systems, (2) for improvements related to airline operations, ATM operations, and ground operations, (3) for measures that influence the demand for air transport, and (4) for sustainable aviation fuels (SAF). In this paper, a particu-

lar emphasis is placed on SAF as the only mitigation option that can potentially realize high GHG emission savings in the medium term. It estimates SAF production out to 2050 for a set of policy-informed scenarios, calculates the associated GHG emission reduction for each scenario, as well as the required capital investment. The SAF production potential for developing countries and the opportunities and hurdles of SAF deployment in these countries are also presented.

The webinar provided session viewers insights into (i) the efforts and strategies of the aviation industry to reduce its carbon footprint, (ii) the development and use of Sustainable Aviation fuels to date, (iii) the outlook towards the long-term goal of reducing emissions in 2050, and (iv) the future for SAF and the pathways most likely to address the climate challenge.

WORLD BANK WEBINAR

How Will Increasing Government Ownership Affect the Efficiency of Airlines? (15 December 2021)

With the injection of close to USD 250 billion in state financial aid in response to the COVID-19 pandemic crisis, the aviation industry is primed to be dominated by a heavy state presence in the years to come. The support has made the topic of airline ownership structure more relevant than ever. Although the last three

decades have seen increased flows of private capital into the industry, governments continue to play a critical role in shaping market outcomes, either in the form of direct ownership of national carriers or through the allocation of traffic rights and airline designations in air services agreements. There is a growing concern that the expansion of government capital in the sector may crowd out private capital to the extent that it may endanger or even reverse the privatization the industry has seen in recent decades.

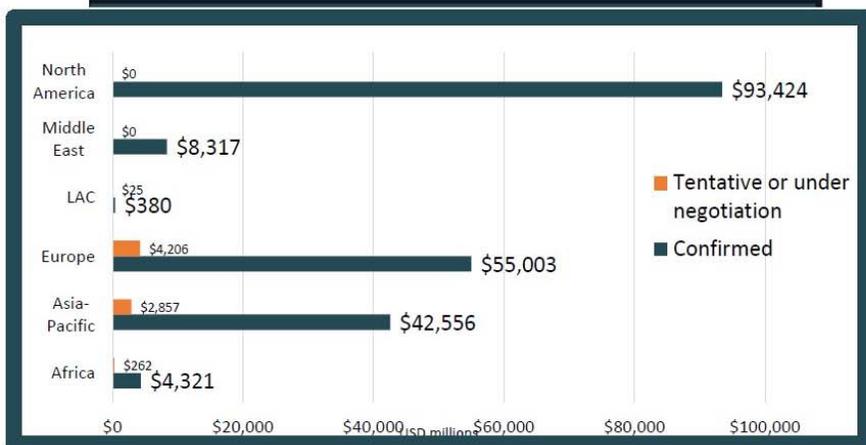
The webinar presented findings from an ongoing benchmarking exercise of about 250 global airlines, which explores how government holdings influence managerial incentives to reduce operational cost inefficiencies. The authors estimate their model using a stochastic frontier approach by exploiting a rich and original database. They show that the proportion of government holdings in an airline affects the optimal managerial effort in a quadratic way, which implies that neither a pre-private nor government ownership is optimal for achieving cost efficiency.

AVATION SOLUTIONS AREA (AVSA) Handbook for the Development of Air Transportation (P176540)

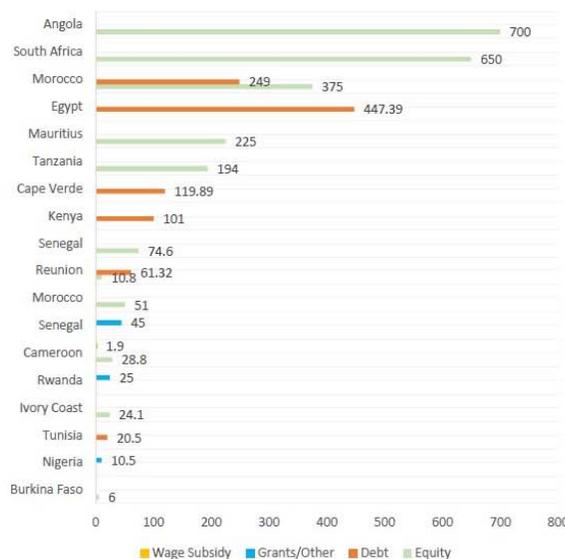
The World Bank Transport Global Practice intends to produce a “Handbook for the Development of the Air Transport Sector”. The overall objective of this

State Aid for Aviation: >US\$ 207 bn but Africa is left out

Support for African Airlines came mainly as Equity Injection, SA and Angola leading



Equity injection dominates support type in Africa



Source: World Bank using ISHA data

Africa's share of the hitherto confirmed/proposed state aid (> US\$210 billion) to the air transport sector is about US\$4.3 bn or 2% which mirrors African countries' constrained fiscal space & their ability/willingness to rescue the sector

knowledge product is to build, expand and disseminate core sector concepts and good practice fundamentals involved in the development of air transport. The rationale for providing such a handbook, both internally and externally, is the current lack of understanding around air transport sector challenges by many transport generalists, government and civil service professionals, at large. The target audience is development and sector professionals in government and the private sector, especially in developing and emerging countries.

The intermediate outcome will be the publication of a Handbook that aims to provide a concise yet comprehensive guide to the foundational principles of air transport by outlining the basic elements of the air transport system, including the policy, regulatory, and operational considerations in the prospect of sustainable solutions in the provision of air transport. The Handbook will be relevant to both developing and advanced economies by providing knowledge to practitioners and policymakers around the world. It will be designed as a reference book to offer a high-level overview to be conversant on sector dynamics, as well as guide readers for finding other technical resources, as may be necessary. It will also touch on key emerging issues, including decarbonization of aviation and new technologies such as unmanned aerial vehicles, seen from the perspective of developing client countries.

The Handbook is also intended as a staff resource to frame complex technical regulatory requirements, international and regional obligations, as well as competition and access policy implications in the public-private provision of infrastructure and services. The Handbook will build on lessons from the Bank's recent and past sector engagements to provide an easy-to-read resource that introduces key institutions, critical infrastructure requirements, oversight accountabilities, and the range of players in the aviation value and supply chains involved in services and operations. External peer reviewers from partner organizations will be sought as part of a quality enhancement review, including other multi-lateral development banks, Airports Council International, the International Air Transport Association, and the International Civil Aviation Organization.

The Handbook will begin with an overview of the air transport system. It will take a top-down approach to core aspects of sector outlooks through the lens of National Aviation Policy settings, including air transport development strategies, political-economy endorsements, and state obligations in meeting international

commitments. It will address civil aviation regulations and oversight, including an introduction to international standards and recommended practices established by the International Civil Aviation Organization (ICAO), requirements for enabling legislation, the role of civil aviation authorities as guided by national safety regulatory requirements, and expectations of State Safety and State Security Programs. The Handbook will address the finance and economics of air transport, including competition policy (domestic air traffic) and access rights (international air traffic), air service agreements and open skies policies. An overview of demand forecasting for both passengers and freight will be presented, along with airlines, airport and air navigation service providers' revenue structures, including the setting of fees and levies. Relevant chapters on air traffic management, airports and airlines will cover aspects of their respective corporate governance structures, oversight and compliance requirements, infrastructure and facilities, business development, finance, economics, and operational management considerations. The Handbook will also cover regulatory and operational aspects of measuring and managing environmental impacts related to noise, emissions, and water pollution, as well as sector implications on climate change, such as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), the Airports Council International Airport Carbon Accreditation program, and sector contributions to NDCs for reducing greenhouse gases.

WORLD BANK POLICY PAPER

The COVID-19 Pandemic and Air Transport in Southern Africa

The World Bank Policy Paper on "The COVID-19 Pandemic and Air Transport in Southern Africa" explores policy and operational strategies to build back a safe and competitive air transport sector in the aftermath of the COVID-19 crisis in select Southern African countries. It specifically reviews the status of the sector in Botswana, Eswatini, Lesotho, Namibia, and South Africa by assessing the current and expected needs and by exploring various strategies and policies to guide the World Bank Group's policy position and potential operational responses. The Policy Paper mainly focuses on the state-owned airlines in the region and explores airlines' reform options and policy directions to re-build an air transport sector that meets international, regional, and local demands. It builds on: (i) a recent World Bank Policy Note which reviews pre-COVID-19 sector challenges in Africa and recommends operational and policy responses to mitigate the impact of the pandemic,

and (ii) a technical paper on the impact of the pandemic on air transport connectivity in the Southern Africa Region.

According to the Policy Paper, the pandemic crisis could bring much needed airline restructuring in Africa, but their business models need to evolve fast to balance costs with diminished revenues. Experts agree that the pandemic will not only have a long-lasting economic effect but that it will also change the shape of travel. The new realities brought by the pandemic should become catalysts for business model enhancements and substantial restructuring of unprofitable routes and excess personnel, fleet, and debt. Instead of running airlines, the newly vested role of the state should consist of ensuring the legislative framework and creating responsible governmental agencies to control the implementation of regional aviation policies. Specific country considerations are summarized below:

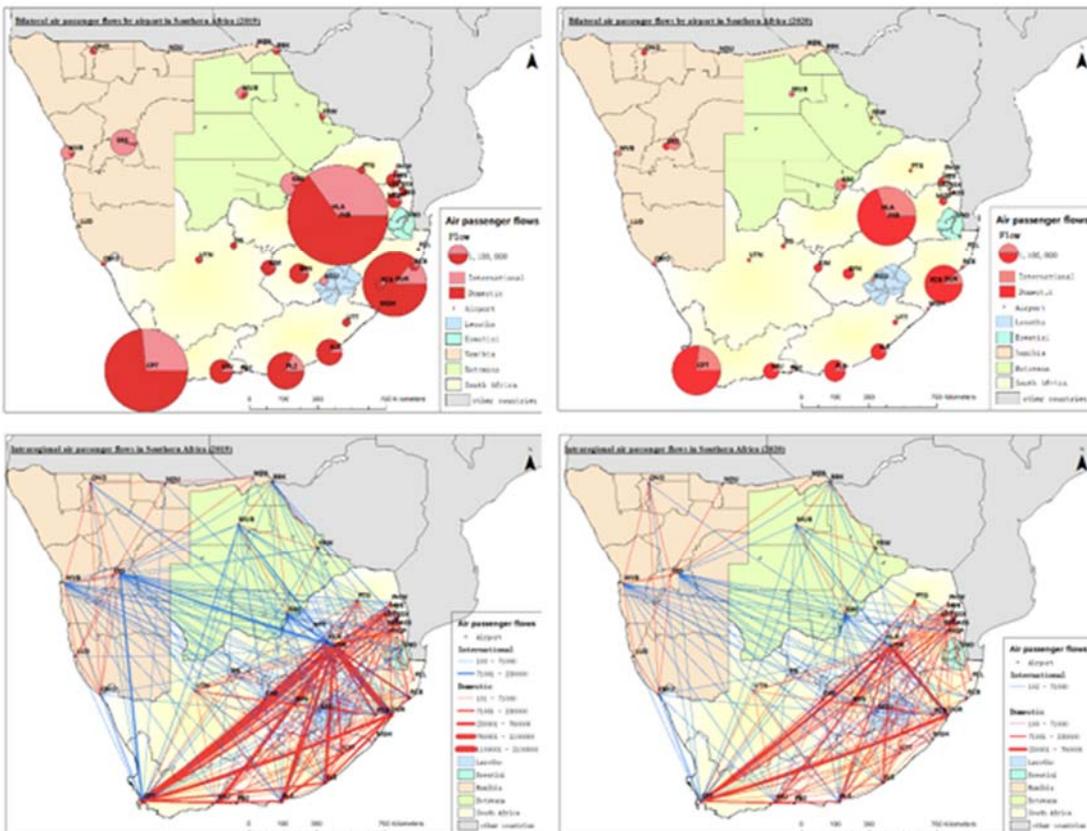
Namibia: Further steps need to be taken to enable a non-Namibian airline FDI to cover demand adequately and facilitate sufficient capitalization of domestic airlines. With the liquidation of Air Namibia, the statutory protection monopoly on international and domestic routes was eliminated allowing for the initiation of scheduled services by FlyNamibia (previously named FlyWestair), the incumbent Namibian private sector air-

line. Because of the low level of pre-pandemic demand, predominantly connecting to South Africa's economic points, allowing South African and Namibian airlines to operate cabotage services to/from Namibia would maximize the country's potential to reestablish connectivity on routes that make financial sense. To maintain domestic connectivity, a public service obligation for those routes where no operation is feasible but necessary from an economic and security perspective can be evaluated and publicly tendered.

Botswana: An objective and fundamental assessment of Air Botswana's viability based on realistic assumptions is necessary. Throughout the last decade, the government of Botswana has been searching for an equity partner from the industry to shape the performance of Air Botswana. A regional carrier would be the ideal partner to benefit from the network scale and spread of unitary costs. Similarly, a private majority investor would reduce the SOE's dependence on state grants and foster the development of a cost-savvy environment, ringfencing the airline from political influence. With the promulgation of the airline transition legislation in 2022, there is a new momentum to implement a privatization plan, but there appears to be limited preparatory work to put the airline on the market. This calls for a thorough due diligence on the airline to assess its viability and worth, including corporatization strategies that might result in its restructuring.

South Africa: The pace and shape of market recovery will determine South Africa's state-owned airlines' restructuring options and successes. The recovery is expected to last another two years. As of now, there is more capacity available than is required by demand in the country. British Airways and Kulula.com (Comair) recommend operations in September 2021, although they are still in Business rescue as of March 2022. The new SAA has also announced

Figure 3.2: All Airports and Regional Networks Saw a Substantial Decline in Air Passenger Flows



the launch of domestic and regional operations with a six aircraft fleet. Its low-cost subsidiary, Mango Airlines, is aiming to restart with an eight-aircraft operation, putting it in direct competition with Lift Airlines, an LCC owned by Global Aviation, a member of the private sector consortium in the process of purchasing SAA. This is contrary to the new SAA business plan, where Mango Airlines' division would disappear and remain as a sub-brand fare category. The business plan supports the continuation of intercontinental flights through 2022, despite the fact that these were the routes that generated the most losses and had pre-pandemic load factors of only 70%.

The transitional SAA has relaunched flights from Johannesburg to Cape Town, Accra, Kinshasa, Harare, and Lusaka, competing with Airlink on four of the destinations and likely resulting in overcapacity. Overcapacity can do more damage than good. The generation of excess capacity could trigger state financial aid to keep SAA operating. Additional factors play against the new SAA business plan, such as its image, which has been seriously damaged, especially among high-paying corporate travelers; and the larger aircraft size that will limit its capability to match Airlink's high-frequency/business travel friendly schedule. SAA has prepared an ambitious but risky business plan to re-enter the market, considering the re-establishment of loss-making long-haul flights as of the second and third years of operation. The initiation of long-haul flights in any economic environment should happen only with the support of a profitable domestic and regional network.

While there has been an easing of market regulations, critical regulatory hurdles remain in the five countries and the broader SADC region to make the air transport sector truly competitive. Limited fifth freedom traffic rights for foreign carriers and unregulated state aid are preventing network development and diminishing consumer welfare. While the pandemic has exacerbated the region's perennial regulatory challenges, it also presents opportunities to tackle some of them. Considering the unique challenges of the African air transport sector as well as various state support given in response to the COVID-19 pandemic induced crisis globally, policy options for sustainable recovery of the southern Africa include:

- (i) Further liberalization of the African market;
- (ii) More participation by non-African airlines;

- (iii) Encourage more private sector participation;
- (iv) Apply competition rules broadly;
- (v) Improve safety regulation and standards.

AIRLINE 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 airline 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 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*

In 2021, the airline advisory system contained a total of 811 carriers. Of these, 386 were classified category 1 and 233 as category 3, both representing 619 or 76 percent as *Good to fly*. Three airlines underwent a special review and were classified 3a (*Good to Fly*), 136 were considered 3b, representing some risk, and 56 were ranked 3c, with serious risk.

Travelers are reminded 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>

Second Malta Aviation Conference & Expo (MACE) 2020

Between 18-20 November 2020, the World Bank Air Transport Team participated in the 2nd Malta Aviation Conference & Expo (MACE) focusing on *A Sustainable Aviation Industry through Finance, Regulation & Operations*. Dr. Charles E. Schlumberger delivered the closing key note on the first day online focusing on *Aviation Post COVID-19*.

Due to COVID-19 restrictions, the conference was held online, and featured live keynote speakers, a virtual expo, virtual networking opportunities, live meeting rooms, and more. The objective of the event was to create an environment of collaboration and cooperation for aviation leaders to come together and aid each other during the COVID-19 period, but also with a keen view towards the future of the industry.

Delegates had the opportunity to participate in live panel debates, meet industry suppliers and discuss the themes of the event with regulatory officials, industry professionals and subject matter experts. MACE 2020 included local and international policy makers, operators, aviation industry professionals, legal and regulatory consultants and global users. The WB presentation focused on the global economy, the current stage of the airline industry, the risk the aviation sector is facing, and gave

a special focus on the effects of the COVID-19 pandemic on the airline industry.

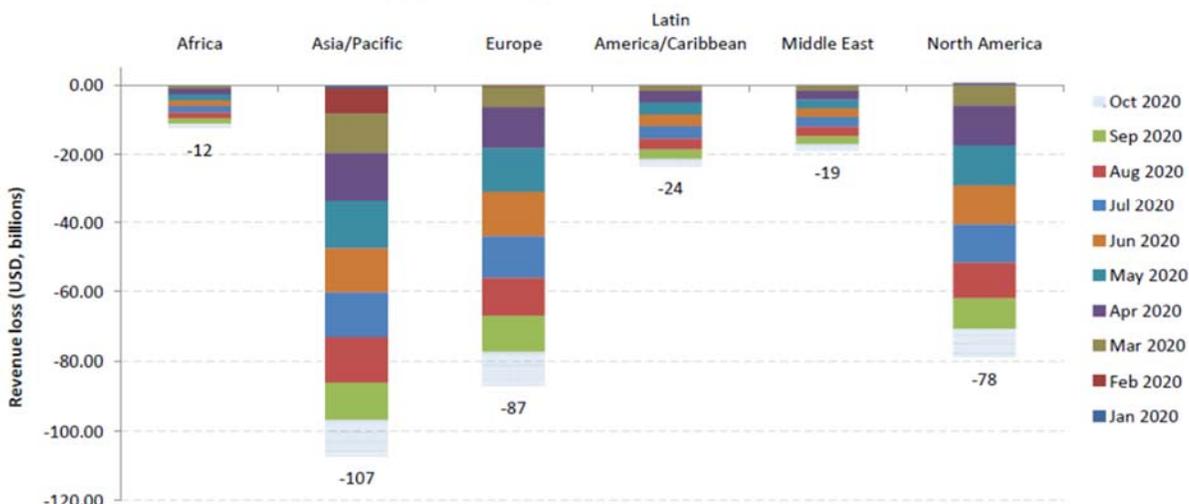
The conclusion of the presentation and the following discussion was that the global economy is not only slowing, recession is on the rise, and the impact of aviation industry is clearly immense as illustrated in the 60% decline in world total passengers in 2020.

High-Level Ministerial Meeting on Enhancing Air Transport Connectivity and Growth in West Africa 2021

A High-Level Ministerial Meeting on enhancing Air Transport Connectivity and Growth in West Africa was held virtually on 17 and 18 March 2021, by the Federal Ministry of Aviation, Nigeria in cooperation with the International Partners for Aviation Development, Innovation and Sustainability (iPADIS). The meeting conclude with a 15-point post-COVID recovery plan for air transport in the region, including strategies for the long-term sustainable development of the industry.

The WB presentation focused on the effects of COVID-19 on the airline industry, State support for airlines during the crisis, and the COVID-19 related analytical works at the World Bank.

Approximately USD 327 billion passenger revenue loss from Jan to Oct 2020



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. In many cases, 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 such an Angel Flight mission, which was carried out by Charles E. Schlumberger, Lead Air Transport Specialist and Megersa Abera Abate, Transport Economist, was a flight to transport baby Isabel, who spent several months at Children's Hospital of Philadelphia, and her mother Isabel Collier, home to Summerville, SC.

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.



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For more information visit: www.angelflighteast.org



The initial optimism that the global pandemic would ease and air transportation would recover well in 2021 was hampered by the fact that the COVID-19 pandemic continued to reemerge with new variants, which triggered continued travel restrictions in many parts of the world. This was met with increasing inflation, which manifested itself in 2021 in a doubling of the oil price and the cost of jet fuel. This negative impact on the economy, which affects demand for air travel, is increasingly enhanced in many parts of the world by the recognition that climate change may pose an existential threat and that air transportation was an increasing contributor in terms of greenhouse gas emissions.

Behind this background, global passenger traffic recovered modestly in 2021, with the number of passengers worldwide increasing to 2.3 billion. For 2022, the outlook for the global air transport industry remains uncertain. ICAO initially predicted that passenger numbers would be 26 to 31 percent lower in 2022 than before the pandemic, with seat capacity falling by 20 to 23 percent. In their optimistic scenario, passenger traffic was expected to recover to 86 percent of its 2018 levels by December 2022, based on 73 percent international traffic recovery and 95 percent domestic recovery, and 75 percent in their pessimistic scenario, based on 58 percent international and 86 percent domestic recoveries. The recovery of the sector, however, will experience significant regional differences. North America is expected to recover strongest and to be the only region to return to profitability in 2022. The large US domestic market and additional markets worldwide, including the North Atlantic, forecast a net profit of USD 8.8 billion in 2022. The recovery in Europe is slower, with reduced forecasted losses of USD 3.9 in 2022. In the Asia/Pacific region, given continued strict and enduring travel restrictions, net losses in 2022 are forecasted to decline to USD 8.9 billion. Traffic in Latin America has well recovered in 2021, but the financial outlook for some carriers remains fragile, and the region forecasts a net loss of USD 3.2 billion. The Middle East region has reopened many of its international long-haul routes and is expected to reduce its net losses to USD 1.9 billion. African airlines are forecasted to double their revenues in 2022 and reduce their net losses to USD 0.7 billion. Global connectivity is also recovering. City pairs are forecasted to increase from 85% in 2021 to 92% of their 2019 peak.

The focus on the recovery of the air transport industry must be on its long-term sustainability, primarily in terms of the financial burden and affordability, and the environment. The short-term survival of the industry continues to be supported by governments. However, especially in developing countries where public funds are scarce, support must be conditioned on two facts: (i) the demise of a carrier would negatively impact connectivity and there are no other operators to take over the markets, and (ii) the carrier was profitable before the impact of the pandemic. The restoration of air services must be further enhanced by the implementation of an aviation sector policy that adheres to the principles of safety and security, financial sustainability, and a competitive environment allowing the participation of the private sector.

Addressing climate change, however, is the greatest challenge for all sectors and humanity at large. The transition away from fossil fuels is by far the most pressing global necessity, as fossil fuel use accounts for nearly 34 percent of CO₂ emissions. After energy use in buildings and industry, transport is the third emitter, accounting for 16%, and of this, aviation for 2% of global greenhouse gases. Nevertheless, the international air transport sector's commitment to net-zero CO₂ emissions by 2050 is the first commitment of any industry, and implementation of measures has started with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) scheme, which was adopted by ICAO in 2016. By the end of 2021, 107 ICAO Member States announced their participation in CORSIA. An additional measure, which can be introduced rather quickly, is the deployment of Sustainable Aviation Fuels (SAF) for the aviation sector. SAF are already certified for a 50/50 drop-in blend for aircraft, and they represent a major opportunity for the industry to reach the 2050 goal. Furthermore, the production of SAF creates economic opportunities in many developing countries, as SAF production will become a global deployed industry. To further examine this, the WB is preparing a Flagship Report on Transport Decarbonization, which assesses and quantifies the decarbonization options for global aviation, including SAF.

Given these challenges, but also the opportunities of air transportation in developing countries, the WBG will continue to provide support for the development of sustainable, safe, and affordable air transport services.

OUTLOOK



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