



Assistance for Action

Aviation and Climate Change Seminar

23 - 24 October 2012

ICAO Headquarters, Montréal, Canada



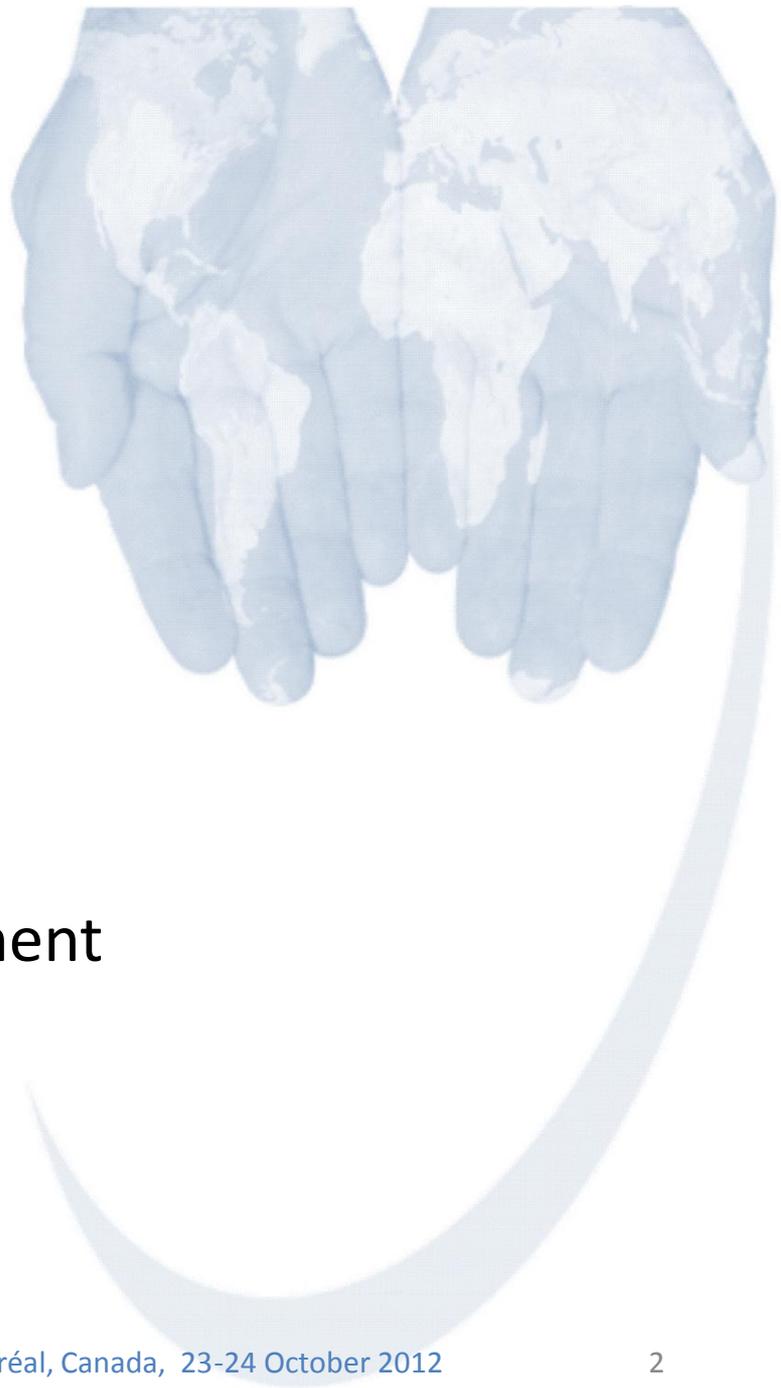
ICAO's Technical Co-operation Bureau

Field Operations overview and presentation of case-study



Content

- TCB Mission & Objectives
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TCB Mission & Objectives

- Provide in-depth technological assistance to States with their aviation projects.
- Support ICAO's Strategic Objectives:
 - Safety
 - Security
 - **Environmental Protection**
 - Sustainable Development of Air Transport
- Contribute to global and uniform implementation of ICAO's Standards and Recommended Practices (SARPs)



Examples of TCB Assistance

- Update of basic air law and civil aviation regulations and procedures
- Reorganization of civil aviation administrative structure
- Airport planning and development
- Air navigation services planning and implementation
- Studies – Aeronautical, ATM, etc.
- Development of environmental master plans
- Fellowships & Developing Country Training Programmes
- Procurement of civil aviation systems and equipment



Project Modalities - Classification

- **Country Project** - confined to the civil aviation sector within the recipient country
- **Regional Projects and Programmes** – several States participate in a project to improve civil aviation on a regional basis
- **Interregional/Global Projects and Programmes** two or more ICAO Regions or to the entire developing world, e.g. assistance in the implementation of the World Area Forecasting System in all or most developing countries.





Project Modalities - Agreements

- Management Service Agreement (MSA) - a flexible framework for future projects
- CAPS – Civil Aviation Purchasing Service
- Lump Sum Agreement (LSA) - similar to the MSA, relate to activities of a short duration, total amount payable is fixed in the agreement
- Trust Fund, Letter/Memorandum of Understanding



Project Modalities - MSA

- Acts a flexible framework for future projects:
 - No financial commitment included in the agreement;
 - Project documents, including scope and budget are annexed to the MSA;
 - ICAO's charges negotiated by project component ensuring costs are appropriate to work performed;
 - Recruitment of national personnel;
 - Allows for the management of funds in local currency;
 - Can be used for any of the services offered by TCB.



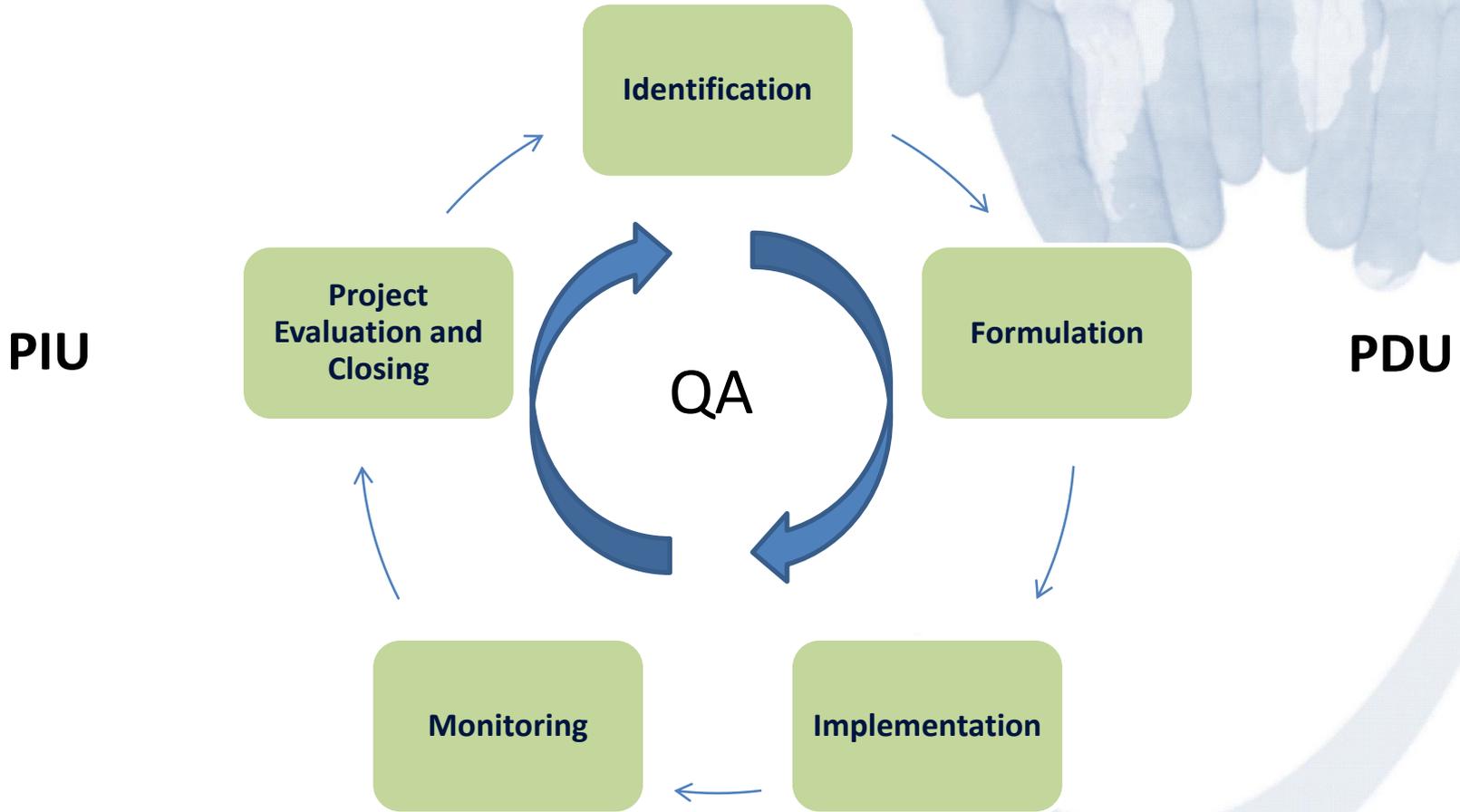
Project Modalities

- Financial & Budgetary Control
 - ICAO Financial Regulations and Rules
 - Funds required before implementation
 - Budgetary provisions for activities
 - Project budgets are closely monitored
 - Contributions received credited to separate funds
 - Quarterly financial statements are provided



Project Life Cycle

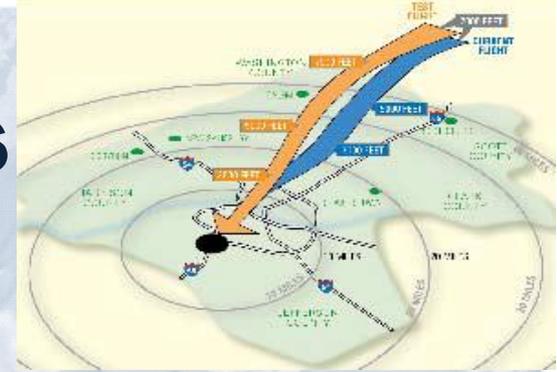
from initial conception to a successful conclusion





Potential Projects

ATM Studies



- Environmental impact assessments of ATM operational changes:
 - Reduce environmental impact – noise, air quality, water quality;
 - Improve security; sustain safety;
 - Safely Increase Air Transportation System Capacity.

- Optimized Flight Paths:
 - Standard flight paths involve a series of stepped descents.
 - Continuous descent approach procedures:
 - reduce noise impacts by keeping aircraft higher, longer;
 - reduce fuel burn and emissions of local air quality pollutants;
 - continuous descent arrival to save 100 gallons per approach.



Potential Projects

Airport Planning

➤ Challenges:

- Expansion of spaces in terminals
- Flight Procedure Design
- Review of terminal airspace for noise reduction
- Land-use planning
- Integration of intermodal transportation
- Rerouting accesses to the terminal

➤ TCB can provide:

- Aerodrome Engineer
- Aerodrome Architect
- Operations Expert
- PANS-OPS Expert
- AVSEC Expert
- CNS / ATM Expert
- **Environmental Impact Expert**
- Other specialties



Potential Projects

Training

- Under the ICAO fellowships programme, donor states partner with training institutions to provide funded fellowships to candidates from developing ICAO Contracting States.
- Upcoming seminar in “Sustainability and Environmental Management of Air Transport Infrastructure” will be delivered in Cartagena, Colombia from 3 to 7 December 2012.
- Approximately 30 of 50 attendees will receive scholarships.
- The seminar is organized by ICAO, AENA and AECID with funds provided by the government of Spain through the project RLA97903.



Case Study – Costa Rica

- ICAO TCB requested by the Costa Rican Civil Aviation Authority to provide assistance in the development of an **Environmental, Economic and Social Assessment** to determine the viability of project “*Aeropuerto Internacional del Sur*”.
- The airport is to be developed as a “Green International Airport” - Planning, Design, Engineering, Construction and Operation phases.
- The project includes the formulation of the technical specifications and the call in competition of tenders for the elaboration of the final project and the construction of the airport, as well as equipment for air navigation and airport services services, including the training of personnel.



Justification for new airport.

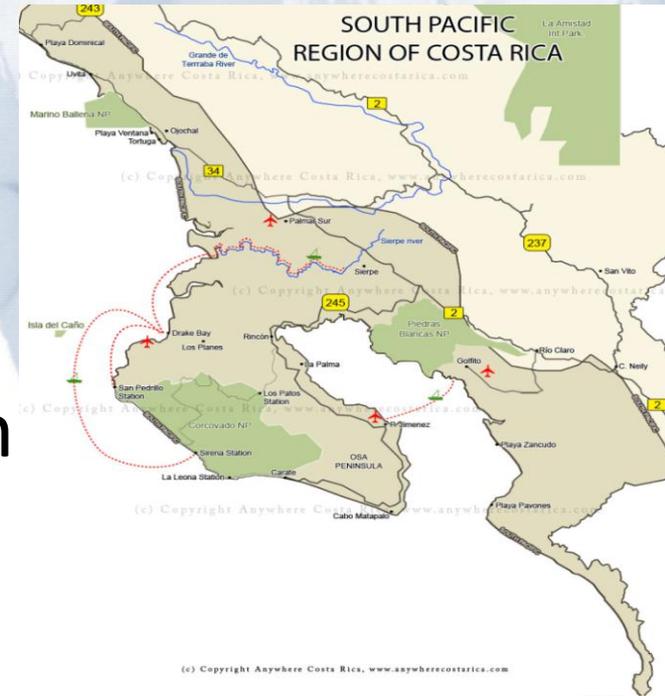
- One of the less developed areas in country
- Economy - agriculture, cattle and fisheries
- Improve social and economic development of the Región Brunca.
- Promote sound economic growth of south region, Valle del Diquís





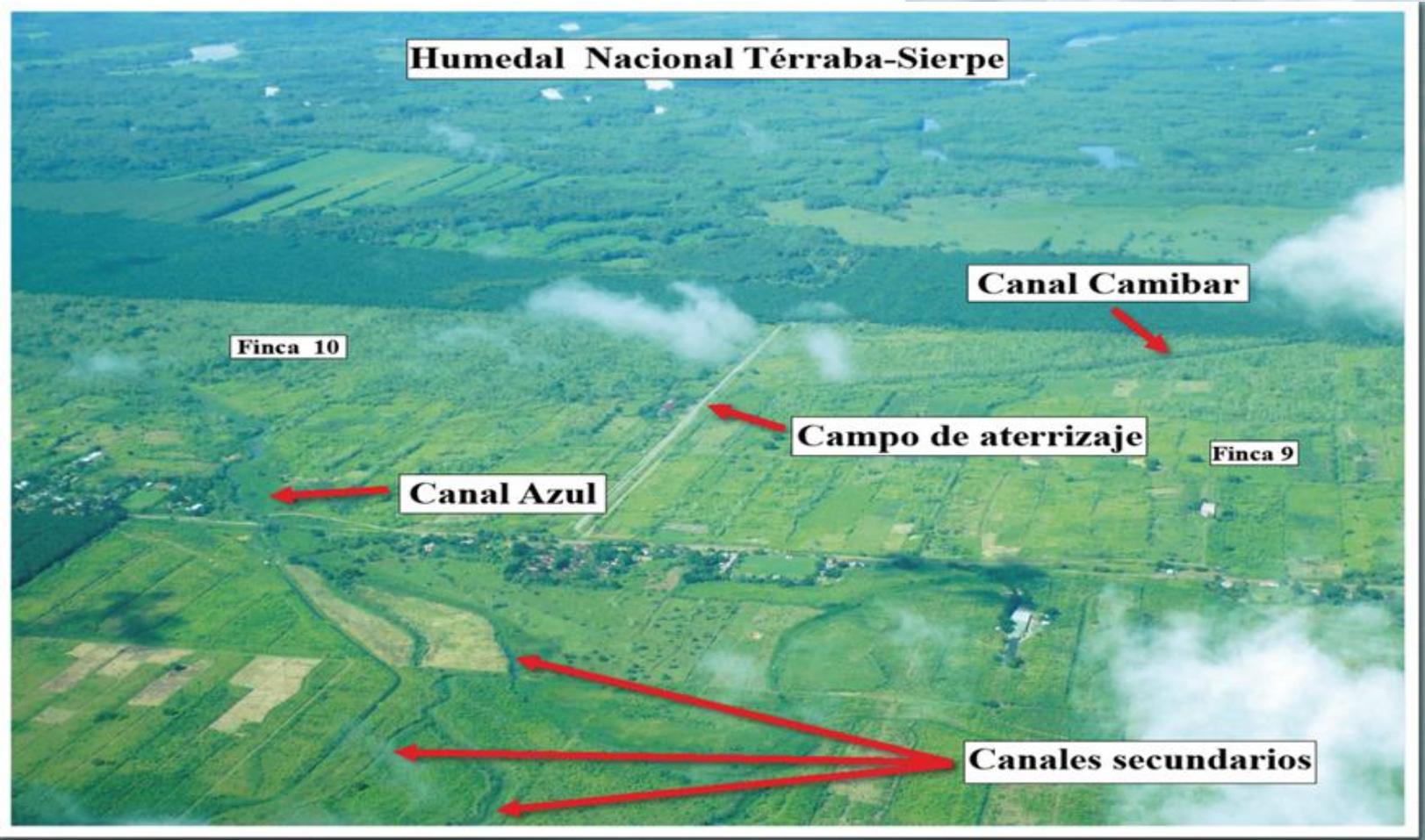
Opportunity

- Due to lack of transportation infrastructure, the region has not benefited from ecotourism as in other areas in Costa Rica.
- Construction of *Aeropuerto Internacional del Sur de Costa Rica* provides an extraordinary potential for eco-tourism.





Location - “Valle del Diquis”.





Location - “*Valle del Diquis*”.

- Six natural parks and reserves within the area of influence of the airport with world class biodiversity
- From an **archaeological standpoint**, the whole *Cantón de Osa* was declared "County of Archaeological Interest" by governmental decree in 1994
- In 2007 the government declared the "*Paisaje Cultural del Delta del Diquís*" (Cultural Landscape of the Diquís Delta) of “public interest” and promoted its candidacy to become a UNESCO World Heritage site.



"esferas de piedra"

- Pre-Columbian settlement remains which can be seen north of the project location.





Government Decision

- In 2011 the Government declared as of “public interest” the lands to be assessed for the location of the future International Airport
- The project has been conceived as a Green Airport and must be planned accordingly, with consideration of all local and international environmental regulations and mitigation of any negative impact
- **The project’s first step will be to conduct an environmental, economic and social evaluation.**



ICAO Assistance

- 2011 - Annex to MSA signed between the GDCA of Costa Rica and ICAO for the provision of technical cooperation in the **ENVIRONMENTAL, ECONOMIC AND SOCIAL IMPACT EVALUATION AS PART OF THE PLANNING PROCESS FOR THE PROJECT OF A NEW INTERNATIONAL AIRPORT AT PALMAR SUR, REGION BRUNCA, COSTA RICA.**
- TCB subsequently issued a Request for Proposals on behalf of Costa Rican Civil Aviation Authority to carry out the Environmental and Social Impact Assessment



Purpose of the assessment

- Conduct systematic examination of environment, social & economic impact of the project activities
- Evaluate the consequences of the development actions in advance
- Eliminate potential negative impact
- Determine what mitigation and compensation measures should be included in the project
- All of this as part of the Environmental Management System (EMS).



Specific objectives

- Conduct archeological study to identify existing archeological resources within the airport site and assess the impact of airport construction on these resources.
- Complete aviary & fauna study to define the management control of wildlife in relationship with the aerial navigation and operational activities of the airport.
- Describe economic & social conditions within the project area.



Specific objectives – cntd.

- Conduct noise environmental study to provide aircraft noise and environmental impacts to land users around airport project area.
- Identify and assess the environmental effects of the construction and future operation of the airport.
- Evaluate measures to minimize adverse environmental and social impacts associated with the airport construction and operation.
- Determine environmental, social and economic viability of the project.



Expected Reports

- Environmental Impact Evaluation Report
- Cost Estimation of Environmental Impact Evaluation
- Associated measures and Socio-Economic Environmental Evaluation
- Supervision/Management Plan
- Aeronautical Flight Path, Noise & Gas Emissions
- All documents required to obtain the official environmental viability by SETENA (The Costa Rican Environmental Body).



Strategic objectives of ICAO

- Objectives of this project are directly linked to ICAO's Strategic Objectives established for the period 2011-2013.
- A new airport project built from the ground up with the following in mind:
 - Operational safety;
 - Operational security;
 - Protection of the environment;
 - Sustainable development of air transport

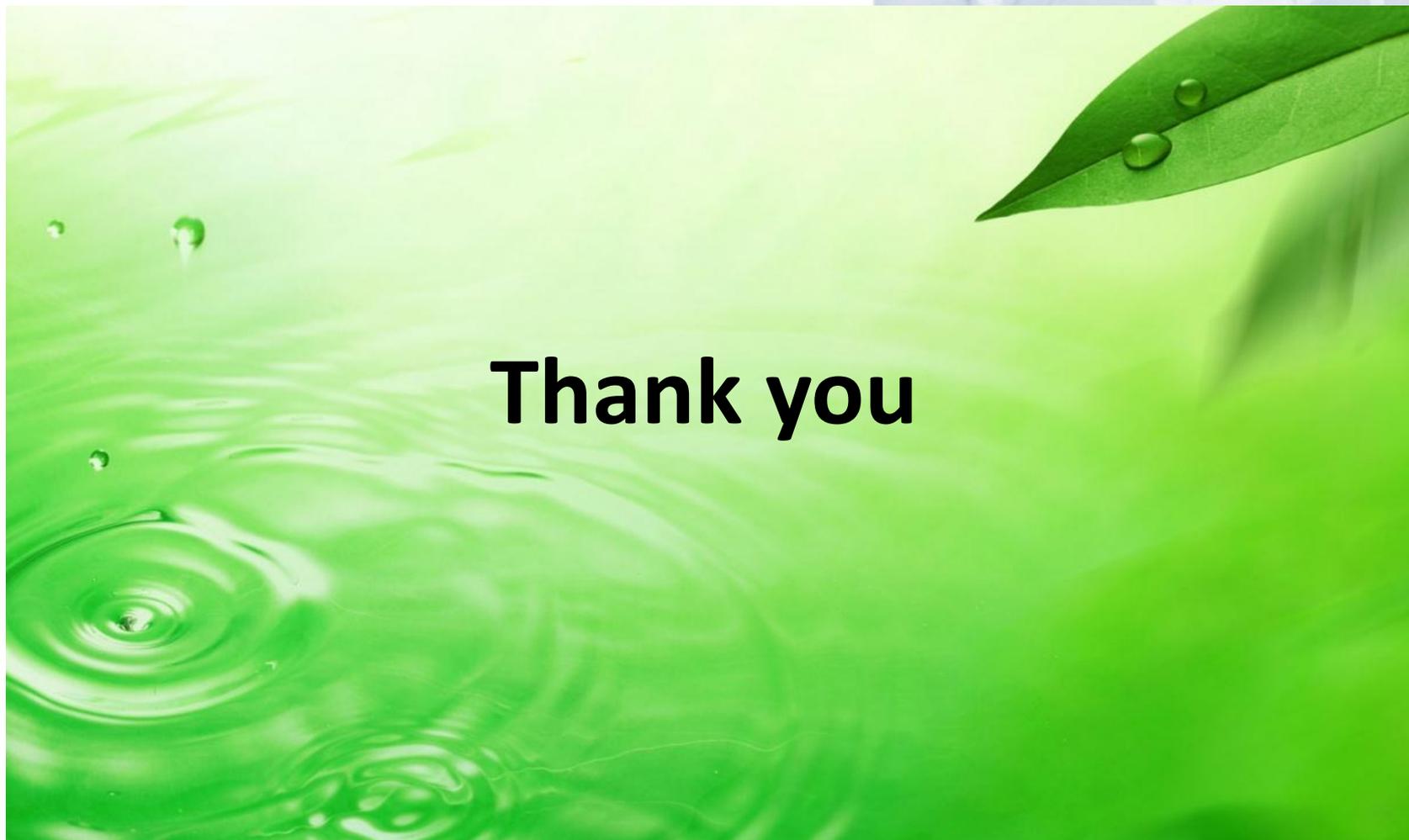


ICAO inputs - International staffing

- Aerodrome Engineer, Project Coordinator 60.0 m
- Hydraulic Engineer 12.0 m
- Biological Engineer 18.0 m
- Air Transport Economist 1.5 m
- Airport Architect 2.0 m
- Pavement Engineer 2.0 m
- Airport Electro-Mechanical Engineer 1.0 m
- Communications, Navigation & Surveillance Expert 1.0
- Air Traffic Management Expert 1.0 m
- Other consultants as required.



Congratulations Costa Rica!



Thank you