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Agenda Item 8: **Regional Cooperation and Training Matters**
8.3 **Other Regional Cooperation and Training Matters**

AIRPORT TO AIRPORT MUTUAL AID PROGRAMS – DISASTER OPERATIONS GROUP CONCEPT

(Presented by United States)

SUMMARY
Airport operators have a long history of helping other airports in time of need. However, assistance provided to other airports hasn't always been preplanned, or coordinated in advance to ensure efficiency and effectiveness. In the United States, a concept called the Disaster Operations Group (Airport to Airport Mutual Aid) grew out of the need to address widespread disasters, where airports may not be first in line to receive disaster assistance. The program concept provides airport operators a formalized, organized framework for them to use to establish mutual aid programs and agreements with other airport operators.
Action: The C/CAR area is invited to review the disaster operations group concept to determine how it may benefit them in disaster response and recovery, and apply the concepts deemed appropriate and prudent to their specific situation.

References:
• Airport Cooperative Research Program Report 73: Airport-to-Airport Mutual Aid Programs (Guidebook).
• Advisory Circular 150/5200-31, Airport Emergency Plans
• ICAO Annex 14, Volume I, *Aerodrome Design and Operations*
• ICAO Document 9137, Part 7, Airport Emergency Planning

Strategic Objectives	*This working paper is related to Strategic Objectives:* *A. Safety – Enhance global civil aviation safety* *B. Security – Enhance global civil aviation security* *C. Environmental Protection and Sustainable Development of Air Transport*

1.   Introduction

1.1   The FAA regards safety as its number one priority. We recognize that there are many safety challenges faced by airport operators. Disaster response and recovery is one of the most significant challenges that an airport can face. A major disaster, such as an earthquake or hurricane, can devastate airport operations at a time when the airport may be the primary conduit for relief operations. In addition, it is well documented that a major wide-scale disaster in a country may stretch existing in-country relief and recovery assets such that those assets are primarily directed toward relief operations for humanitarian assistance. In such a case, recovery assistance for the airport may fall to a secondary priority in the initial phases of relief and recovery operations. A coordinated, pre-planned, assistance effort involving sister airports that incorporates established protocols, checklists, and trained staff, may assist an airport seeking to recover and restore continuity of operations. Such a model exists in the Disaster Operations Group concept and is presented in this working paper.

2.   Discussion

2.1   *History*: Airport operators in the U.S. have historically entered into mutual-aid agreements with other operators so that they may provide assistance to the airport in times of need, particularly when assistance is needed beyond the capabilities of the airport. These requirements are codified in the U.S. in the regulation for airport certification which states, "Airports must plan for an emergency response to a natural disaster, and coordinate the plan with local agencies, tenants, and all others who have responsibilities under the established emergency plan". ICAO guidance in Annex 14, Volume I and in Document 9137, Part 7, essentially discusses the same requirement. This model of mutual aid assistance utilizing local responders, works well when the disaster is not widespread, and does not overwhelm the capabilities of the airport, such as during an on-airport aircraft crash. The problem is when the natural disaster is widespread, such as from a hurricane, and exceeds the capabilities of the airport. The time when the airport may be most important, may unfortunately be when it is under the most stress. At that time it may not be capable of rapid restoration solely using its existing assets and resources. A model of pre-planned assistance and recovery protocols, and assistance from sister airports, countries, or agencies, may help to restore essential services at the airport, and thus may help recovery in the country as a whole. As Airport Cooperative Research Report (ACRP) 73 states, "Municipal and private utilities and public works departments have for several decades, depended on mutual aid during times of large-scale disasters. What began as, informal 'handshake' agreements, has evolved into very large, well-organized mutual aid programs that have proven their worth in response to disasters such as hurricanes, earthquakes, floods and winter storms." The Disaster Operations Group concept for airports is built upon this experience and ACRP report 73 on this topic serves to offer a guidebook of airport-to-airport mutual aid programs that can assist airports who would like to enter into formal or informal agreements with other airports in the event of a community wide disaster requiring assistance beyond their capabilities.

2.2   *Concept Framework*: The ACRP study reviewed operations conducted by the Southeast Airports Disaster Operations Group (SEADOG), the Western Airports Disaster Operations Group (WESTDOG), the Colorado Aviation Recovery and Support Team (CARST), and the Miami Centered Mutual Aid Program (modeled after the Airports Council International 'sister-airport' program). It uses their challenges and successes to date, and incorporates reviews of non-aviation mutual aid programs in the U.S., such as those developed by the New Hampshire Public Works, the American Public Power Association, and others. The concept has been activated and tested on several occasions in the U.S including airport-to-airport responses to Hurricane Ivan in 2004, Hurricane Katrina in 2005, and Hurricane Ike in 2008.

2.3   Although non-aviation mutual aid programs established the model by which the DOG concept was developed, it is airport-to-airport mutual aid that is the most intriguing. ACRP Report 73 begins with a simple statement, 'airports know airports'. From that simple acknowledgement of the fact that airports require specific types of equipment, and specific skills and qualifications in their staff, is the realization that only other airports can provide such equipment and experience in time of need following a disaster. The DOG airport-to-airport mutual aid concept incorporates certain functional elements and expectations. They include:

-   Protocols, procedures, agreements and financial considerations should be developed and documented by committee well in advance of a disaster. These agreements and associated technical guidance should form the basis of a standard operating procedure (SOP) document that is used to guide response.
-   The SOP should include asset inventories and definition of a Minimum Essential Equipment (MEL) list for airport operations, identify the minimum staffing required following a disaster, and define the skill set of required staff members. A gap analysis of these MEL inventories then establishes the initial requirements list for an airport in post-disaster recovery.
-   Logistics, communications, work processes, security and other required protocols are established in advance.
-   Airport-to-airport mutual aid should remain under the control of the receiving airport.
-   It must have strong governmental and senior management support.
-   It should only be used for aviation related assistance and should only be requested of a partner following a disaster.
-   Disasters are categorized by scale and this categorization is used to establish response protocols, thus making responses more effective and less costly.
-   It is most effective when it is operated under a 'pull' methodology, with the receiving airport determining what is needed and when.
-   It must be completely voluntary.
-   In the U.S it is developed in accordance with the principles associated with the National Incident Management System (NIMS) and managed under Incident Command System (ICS) protocols. In the international context the principles of NIMS related to disaster phase recognition, establishment of standard terminologies, command and control authority, communications, functional teams, security, training, and outreach are as important as they are in the U.S..
-   There must be an effective communications system in place prior to activation.
-   It must have a clearly defined purpose and scope.
-   Any aid teams dispatched must be as self-sustaining as possible.
-   Any costs and funding agreements must be developed well in advance and established by agreement.
-   The effort must incorporate all entities involved in airport operations and continuity of operations (government agencies and authorities, air carriers, local agencies, non-governmental agencies, professional organizations, ICAO, etc.).

2.3.1   *Development of a Program*: Although non-aviation mutual aid groups (i.e. public utilities) are widespread and well developed, in the U.S. the SEADOG and WESTDOG groups form the core of the aviation disaster operations group effort at this time. There are no known similar international efforts. However, the concept does look somewhat like the existing ACI 'sister-airport' program and the report does reference that program as a potential framework over which an airport-to-airport mutual aid program could be built. More research and investigation will certainly be warranted for this to happen. In the interim the experiences, concepts, and checklists offered in this report are worthy of additional consideration. In the report the following guidance is offered to those interested in developing a disaster operations group program:

- Creation of a new program should be based on need and a realistic determination that the proposed program members are serious and capable. There must be a common interest and a sincerity to participate.
- Stakeholders are identified and an organizing committee is established.
- Goals and objectives are determined.
- As part of a scoping process a hazard and risk analysis is conducted.
- The organizational structure is defined. Note: the disaster operations group concept is scalable to the needs of the members and the determination of risk. There are a number of different models discussed in ACRP 73.
- Liability and reimbursement are addressed.
- Members, volunteers, are recruited and an awareness campaign is executed.
- Funding requirements are identified and addressed.
- Committees are formed and team coordinators are assigned.
- Training is developed and provided.
- Manuals, SOPs, and protocols are written and reviewed. Regarding the contents of the SOP, the following items are recommended to be included by ACRP 73:

    o Roles, responsibilities, and functional procedures of the committee and its leadership.
    o Membership criteria.
    o Steps needed to create/update member resource lists.
    o Responsibilities of membership in regards to:
        ▪ Pre-incident
        ▪ Pre-activation
        ▪ Deployment
        ▪ Execution
        ▪ Post-deployment
        ▪ After-action reporting
    o Communications protocols.
    o Liability and reimbursement.
    o Conflict resolution procedures.
    o Standardized, forms, agreements and checklists.

2.4   *Benefits and Challenges*: The details and program recommendations reflected in ACRP report 73 are based on the U.S. experience. Thus, many recommendations made (such as references related to FAA regulatory guidance and the discussion of the Interstate Mutual Aid Committee) will not be applicable in the international context. However, the general principles associated with the pre-planning and coordination of mutual aid response, whether within the boundaries of a country, or across international borders are applicable.

2.5   Some of the benefits discussed in the disaster operations group concept are:

- Airports know airports and assistance received following a disaster will be expert, experienced, and capable of addressing the specific requirements of the airport in need.
- The program, if designed properly, can be cost-effective and capable of a timely response as protocols, processes, agreements are developed and coordinated in advance.
- Implementing an airport-to-airport mutual aid program can enhance the preparedness of all participants.
- The program offers the opportunity for training and professional growth of airport staff for all airports in the compact.
- Restoration of airport services is faster, and enhances the capability of the airport to provide the lifeline needed for humanitarian assistance to the country or region.
- Following a disaster, lessons-learned can benefit all members of the compact.

2.6   Some of the challenges faced in developing such a program are:

- Establishing awareness of the need for a program within government and the airport community can be difficult.
- Sovereignty and program ownership are complicated.
- There will be concerns about cost and reimbursement among program members.
- Liability of members, especially across borders, will be an issue that must be addressed within the context of the legal system(s) affected.
- Airports often underestimate emergency response needs. Without an accurate estimation of risk and threat, it is difficult to determine and coordinate protocols and needs lists.

3.   **Conclusion**

3.1   There are many safety challenges faced by airports throughout the world, disaster response and recovery is but one of them. There are also creative solutions to address those challenges. This paper discusses the concept that has been successful in developing specific airport-to-airport mutual aid assistance programs in the U.S. It is especially applicable following widespread disasters affecting airport operations and continuity of operations. The ACRP 73 report is available at: http://www.trb.org/Publications/PubsACRPProjectReports.aspx.

4.   **Suggested Action**

4.1   This Meeting is invited to:

    a)   note the contents and conclusions of this paper;

    b)   consider further study of the processes discussed to address the challenge of disaster response and recovery; and

    c)   adopt elements of the concept as appropriate in the international context.

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