

*Meiyu Shao*  
(National Aviation University, Ukraine)  
*A.O. Bieliatynskiy*  
(North Minzu University, China)  
*V.M. Pershkov*  
(National Aviation University, Ukraine)

### **Existing problems and development direction of green airport in China**

*With the increasingly obvious constraints on resources and environment, while providing safety and high-quality services, Chinese civil airports strive to reduce the impact on the ecological environment. This article elaborates on the primary issues that need to be resolved in the process of China's green airport construction and explains the future development direction.*

The concept of green airport was first put forward by American airport clean Cooperation Organization (CAP) in "Green Airport Initiative (GAI)", and then it is gradually familiar with the international community. In China, in September 2007, CAAC first put forward the concept of green airport in the form of a document in the "opinions on the research on the construction of a new green Kunming airport", and then the concept of green airport began to prevail in China's aviation industry.

This article aims to explain the current problems in China's green airport construction and the future development direction.

There are four main problems in China's green airport construction:

1. Energy consumption problems plague airport development. On November 4, 2016, the Paris Agreement on climate change officially entered into force, aviation industry will become the only industry in the world that requires a half reduction in carbon emissions compared with 2005 in 2050; China civil aviation industry requires that energy consumption per ton kilometer and carbon dioxide emissions in five years during the 13th Five Year Plan period be reduced by more than 4% compared with the 12th Five Year Plan.

These requirements mean that the airport construction is facing more and more pressure on energy conservation and emission reduction. The demand of energy consumption reduction in green airport construction is very urgent.

2. Environmental issues restrict airport development.

Noise is the primary issue that restricts the development of airports. The operation of airports will have a certain environmental impact on the surrounding areas, especially the impact of aircraft noise is large, long-lasting and difficult to reduce. Statistics show that in 2009, China operated approximately 166 civil transportation airports, and there were 24 large airports with severe noise impact.

At the same time, the local air quality in and around the airport has become the second biggest issue restricting airport construction. The air quality above the airport is mainly affected by factors such as aircraft operations, tarmac activities, energy production, engine testing, fire training activities, and waste emissions from vehicles

passing through the airport. In addition, waste and aviation waste in the terminal are also environmental issues that restrict the development of the airport.

3. Most airports are not operating efficiently.

The normal operation of flights is a worldwide problem, and it is also an important issue currently facing China's civil aviation. The normal rate of civil aviation flights nationwide in 2019 was 81.65%, facing problems such as the urgent need to optimize the airspace environment and to improve the efficiency of airport operations.

4. Passenger service experience is not comfortable.

Flight delays, airport commercial charges, baggage consignment, etc. have become the main targets of passenger complaints about aviation services. Most passengers said that the comfort of passenger service experience at airports in my country needs to be further improved.

In response to the above problems, we propose the development direction of China's green airport.

1. Pay more attention to the energy conservation and environmental protection of the airport. Under the current requirements and promotion of the relevant documents of the State Council and the Civil Aviation Administration, the airport will use new technologies to increase energy conservation and environmental protection, reduce the airport's impact on the surrounding environment, from the airport's site selection, planning, design, construction, operation and even abandonment of the entire life cycle, learn from the concept of sponge cities and garden airports, implement strict and scientific environmental assessment management, and minimize environmental impact.

2. Airports will be smarter. The construction and application of the airport will be integrated with the development achievements of new technology, big data cloud computing, Internet of things, mobile Internet and other advanced technologies will be applied to the airport, so that the airport production and operation process is more optimized, and all kinds of airport resources are intensive management and utilization are realized.

3. The airport will become a humanistic airport. The airport will take passenger comfort and satisfaction as the measurement standards, making the airport's transportation transfer more convenient, the transfer process more convenient, and the luggage arrival faster. The airport will continuously improve the service functions and process transformation of airport facilities based on the experience of passengers, so as to be people-oriented and become a cultural airport.

4. Airport participants can fully participate in the green airport operation. The airport is a public place, and it is closely related to the surrounding environment and the local city. Therefore, the construction of green airport is not only related to the airport or civil aviation related units, it is closely related to each participant. The airport should widely publicize the green concept and establish a public image of energy conservation and environmental protection. At the same time, it should also get the support of every passenger, local people, and relevant government departments.

## References

1. Ni Haiyun. "Green" Pioneer-Boston Logan International Airport. Air business. 2009(13): 39-40.
2. Shanghai Airport Construction Headquarters. Green Airport: Exploration of the Sustainable Development of Shanghai Airport. Shanghai: Shanghai Science and Technology Press, 2010.
3. Li Hang. On the development model and management of airports from the perspective of service quality management. Air business, 2011 (21): 13-19.
4. Pi Huijuan. Enterprise Green Management. Talent Development, 2010(9): 26-29.
5. Wangchun, Su Baiyan. Green Road Engineering Design of Kunming New Airport. Airport Construction, 2011 (2): 34-37.