

## Abstract

Aircraft noise pollution is one of the environmental conflicts from airport operation between two parties, aviation industry and people who live in the vicinity of the airport. Noise level affects to human hearing ability and causes annoyance, caused by flyover noise from each aircraft and other factors related to noise. In context of international aviation, noise pollution from aircrafts crosses borderline into the other states' air sovereignty. Therefore, international agreement is necessary to solve this noise pollution problem which is the International Standards and Recommended Practices in Annex 16, Volume 1 under the Convention on Civil Aviation 1944, the fundamental legal instrument of international civil aviation. The standards lay down the pillar elements for aircraft noise management which are reduction of aircraft noise at its sources, noise compatibility land use, noise abatement flight procedures, restriction of the operations, and noise charges or levies. Each contracting state shall recognize and follow the commitments under the Convention including the air sovereignty of states, the good neighborliness principle, the non-discrimination principle, the polluter pays principle, the prevention principle, the precautionary principle, and the co-operative principle. They have been applied to resolve the conflict efficiently by contracting states.

Thailand is one of the contracting states under the Convention needs to recognize and apply the commitments under this Convention like other contracting states. These legal measures were adopted into Thailand since B.E. 2518 under the Civil Aviation Amendment Act B.E.2514 (the 6<sup>th</sup> amendment); however, there is none of regulations leading into practice. In 2006, the related regulations with regard to aircraft noise charges for pollution management, noise certificate, flight operation, and air navigation were adopted after the fourth amendment of Annex 16, Volume 1 in 2005. Consequently, the "Balanced Approach" came into the force.

From this study, the legal measures for prevention and control of aircraft noise under the Convention on International Civil Aviation 1944 and Thai laws and regulations are not sufficient to abate the aircraft noise particularly in case of Suvarnabhumi

Airport. Therefore, the proposed recommendations which should be implemented into action in order to enforce the appropriate legal measures and policy to abate aircraft noise are the followings.

The “Balanced Approach” policy should be taken into action in the national policy on air transportation system and aircraft noise management to resolve the conflicts efficiently and flexibly. Moreover, it will lead to more practical action.

The efficient legal measures in compliance with the Annex 16, Volume 1 agreement should be applied to prevent and control the aircraft noise. The noise reduction at its source is the most important measures under the Civil Aviation Act B.E.2551 (the 11<sup>th</sup> amendment) in relation to noise certificate should be applied for. The noise compatibility land use under the Planning Act B.E. 2535 (the 3<sup>rd</sup> amendment) should be applied. The flight operation, aircraft operation restriction, and collection of noise charges or levies to manage noise pollution shall be flexibly and appropriately implemented in practice under the Civil Aviation Act B.E. 2551 (the 11<sup>th</sup> amendment).

Besides, several measures under the Enhancement and Promotion of Environmental Quality Act B.E. 2535 should be implemented in order to monitor and trace back the above proposed measures—i.e. noise monitoring system together with flight tracking system, noise permissible limits with its measurement, calculation, and determination methods, specific determination for making noise contour map for civil remedy related to aircraft noise effects or noise insulation.