

Development Of A Methodology To Estimate World Airport Noise Impact And The Effect Of Mitigation Measures

**Ben H. Sharp
Wyle Laboratories**

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Methodology Requirements

- Determine aggregate world population impacted by aircraft noise for baseline year (1996).
- Include significant noise impact contribution from all world airports with jet operations.
- Estimate impact using local noise metrics and impact criteria.
- Base estimates on actual aircraft operations and demographic data.
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Methodology Requirements (cont'd)

- Estimate the change in population impacted by aircraft noise worldwide for the following noise mitigation measures:
 - Aircraft phase-out
 - Reduced aircraft noise levels
 - Air traffic control procedures
 - Land-use planning

Features of the Methodology

- The methodology includes the noise impact from all scheduled world jet and turboprop passenger, cargo, and charter operations.
- Impacts for 130 world airports (with available noise data) are based on actual airport operations and noise contours.
- Impact based on local criteria and metrics.
- Population impact based on world-wide population database.
- Generalized relationship for impact area vs aircraft operations developed based on actual data received from airports, and used to calculate impacted area at airports for which data is unavailable.
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Features of the Methodology (cont'd)

- The methodology provides an estimate of the current and future aggregate world noise impact. It does *not* attempt to predict the actual noise impact at specific airports.
- Impacts can be evaluated for any airport classification - size, fleet mix, country, region, etc..
- Using the data provided by local authorities, an estimated 150 primary world airports account for 85% of the 1996 world airport noise population impact. These airports account for 60% of daily world jet operations.
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