


# Environmental impact reduction of Aviation




 Air Transport Division  
Environmental & Policy Support

 [environment@nlr.nl](mailto:environment@nlr.nl)

 +31 88 511 31 01

The Aviation sector requires continuous adaptations facing the challenges of Environmental impact and Climate Change. NLR supports its clients with decades of experience leading to innovative and cost-effective solutions. This enables our clients to optimise the balance between operational Safety, Efficiency, Economical and Environmental aspects in an ever-changing world.



NLR applies Research, Consultancy services and Systems and Technology development with the aim to determine and reduce Aviation Noise, Emissions and Third Party Risk in a cost-effective way.

NLR's key strengths are an independent view, versatility and innovation power. Being an independent non-profit research organisation, we develop models, methods, measurement techniques and software tools when standard solutions fall short.

*NLR - Dedicated to innovation in aerospace*

[www.nlr.nl](http://www.nlr.nl)

Member of  **AT-One**



## ENVIRONMENT & POLICY SUPPORT

**NLR has 50 year experience in Aviation Environmental impact reduction. We employ 30 dedicated experts in the field of Environment who provide impact assessments, technological solutions, advice and decision support to our clients.**

**In the end, it is all about cost-effective environmental impact reduction measures. NLR delivers solutions at operational, technological and regulatory level. These solutions are focused at four primary domains:**

### Emissions

- Local emissions assessment: aircraft and airport sources
- Local air quality assessment
- Global emissions impact assessment, policy impact assessments; market based measures

### Noise

- Community Noise exposure (noise contours, number of exposed people, annoyance); noise measurements and validation, noise abatement procedures; impact of weather;
- Flight tracking and aircraft movement data collection; correlation between flight tracks, noise calculations and measurements;
- Optimising the potential noise impact within the regulatory framework, or advice on regulations themselves.

### Third Party Risk

- Evaluation and optimisation of development plans around large and regional airports, both civil and military;
- Advice on spatial planning aspects;
- Setting policies for protection of third parties

### System Technology

- Development of tools and systems for integral determination and reduction of environmental consequences of aviation.
- Performing software engineering, (web based) information provision and system integration to provide advice, decision support and Environmental monitoring and reporting services;

NLR has developed and deployed several Environment related facilities, tools and products:

- VCNS: Virtual Community Noise Simulator
- FANOMOS2: Flight Track and Noise Monitoring System
- Stanly\_Track: Flight Track information on internet
- RAAS: Runway Allocation Advisory System
- Noise Management Tool: Planning and monitoring traffic in order to reduce noise exposure for surrounding communities
- Leas-it: Aviation Emissions Inventory Tool for Airports
- AERO: Global emissions modelling & measure analysis system/ Aviation Emissions and Evaluation of Reduction Options
- TRIPAC: Third Party Risk Analysis Package
- SPADE: Airport Scenario Analysis Platform