

Ole Nielsen
Computational Scientist
Australia-Indonesia Facility for Disaster Reduction, AusAID Jakarta
P: +62 811 820 4637, E: Ole.Nielsen@aifdr.org



Mission

Applying science and technology to problems that matter.

Biography

Ole Nielsen has been an Open Source adopter, promotor and developer since the early nineties during his career as technical consultant, academic researcher, government scientist and development professional within an aid organisation.

Ole has a double Master's degree in Mathematics and Computer Science as well as a PhD in scientific computing from universities in Denmark. After a short stint as a consultant in parallel computing, he joined the Australian National University researching wavelet techniques for predictive modelling, large scale data mining and bio-informatics. Ole took up a position as a computational scientist at Geoscience Australia in 2003 where he was responsible for the development of a hydrodynamic modelling capability and its applications in tsunami impact modelling for Australian emergency management agencies. This work was awarded the Emergency Management Australia "Safer Communities Award" in 2005 and 2007 as well as the "Asia-Pacific Spatial Excellence Award" in 2007. Ole joined AusAID in Jakarta in 2010 to support the Indonesian government in multi-hazard disaster risk reduction.

Ole is the lead developer of the Open Source packages ANUGA (hydrodynamic fluid mechanics) — which was featured on Australian TV (The New Inventors) in June 2009 — Risiko (Spatial modelling of impact from natural disasters) and PyPar (Parallel computing for Python) as well as a number of smaller scientific toolkits. Ole has chosen Python for most of these because of it is the best tool for scientific computing.

Ole is a dedicated advocate for adherence to regression testing, revision control, good error messages and agile approaches to ensure software quality

Ole has been instrumental in elevating the awareness of Open Source in government organisations by demonstrating the strategic advantage of publicising tools as Open Source, promoting Linux and Python as the platform of choice for scientific computing, building Beowulf clusters

and participating in a tender panel for a government wide survey of the uptake and use of Open Source.