

THE MONTHLY LIST

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LIST COMPILES SATELLITE MAPS FOR LAOS DISASTER ANALYSIS

In partnership with the Italian CIMA Research Foundation, the Luxembourg Institute of Science and Technology (LIST) supplied maps documenting the extent of the flooding caused by the collapse of a dam in Laos on 23 July 2018. Together, they took part in a worldwide collaboration following the activation of the International Charter Space and Major Disasters, a first for the Luxembourgish research institute.

On the evening of 23 July 2018, in Southeast Asia, the Lao People's Democratic Republic (Laos) was struck by monsoons, which caused the collapse of a hydroelectric dam, releasing billions of cubic metres of water onto the surrounding villages and affecting thousands of people. Hours after the tragedy, on behalf of the World Food Programme (WFP), UNOSAT, the Operational Satellite Applications Programme of the United Nations Institute for Training and Research (UNITAR), activated the International Charter Space and Major Disasters. This worldwide collaboration allows the transmission of satellite data to assist in managing disasters of natural or human origin, in particular by mobilizing remote sensing agencies and players.

In order to compile as much satellite data as possible for the affected area, quickly and reliably, UNOSAT worked with institutions worldwide. Amongst these, the Luxembourg Institute of Science and Technology (LIST) was called on as a value added provider, a first for the Luxembourgish research institute!

In partnership with the Italian CIMA Research Foundation, LIST supplied maps documenting the extent of the flooding as it correlated to the passing of German and Korean satellites. These maps, which constitute a preliminary analysis of the disaster-stricken areas made possible by the use of a scientifically validated data extraction algorithm, are of great use to on-site authorities, helping them to deal with the urgency of the situation.

These maps have also been made available to the Global Disaster Alert and Coordination System (GDACS), a partnership framework between the United Nations, the European Commission and other authorities responsible for disaster management across the globe, with a view to improving disaster alerts and information sharing and coordination in the initial phase following major disasters. The maps are integrated into the GDACS LIVE map, which consolidates all satellite data analysed by the stakeholders concerned.

LIST researchers have already contributed their expertise to the management of natural disasters in the past. For example, in 2017, the American authorities used flood maps extracted using the algorithm developed by LIST to help manage Hurricanes Irma and Harvey.

Photo, from left to right: Patrick Matgen, Ramona-Maria Pelich, Renaud Hostache and Marco Chini

OTHER HIGHLIGHTS



Luxembourg

LIST DEVELOPS TOOLS TO FACILITATE DECONSTRUCTION SITES

In collaboration with the Environment Agency, LIST has drafted an inventory of construction materials, and an accompanying guide, for professionals involved in disassembly. The tools assist the planning, performance and documentation of disassembly works, aiming to optimize the deconstruction process, plan security measures in advance, improve the promotion of deconstruction resources and consolidate the deconstruction skills of the stakeholders involved. [Learn more at www.list.lu](http://www.list.lu)

Business

LIST SPIN-OFF ATTRACTS AMERICAN INVESTOR

ACT, a US leader in college and career readiness, has recently invested in OAT s.a., a LIST spin-off launched in 2013 that commercializes and further develops the open source computer-based assessment platform TAO® whose first developments were achieved in LIST's laboratories from 2002. This strategic investment is not only genuine recognition of the quality work initiated by LIST researchers more than fifteen years ago in what was, at that time, the innovative area of computer-based assessment, it also showcases the long-term impact of research 'made in Luxembourg'. [Learn more at www.list.lu](http://www.list.lu)



Scientific excellence

LUXEMBOURG TO HOST THE 2019 INTERNATIONAL SYMPOSIUM

LIST and the Luxembourg Institute of Socio-Economic Research (LISER) join forces to organize the tenth International Symposium "Perspectives on the transformation of management and public organizations" to be held in Belval, Luxembourg from 5 to 6 March 2019 in partnership with the Quebec Ecole nationale d'administration publique (ENAP) and the French Chaire Gutenberg 2009 – Ecole Nationale d'Administration (ENA). Taking place for the tenth time, it will focus on the emergence of smart cities and the managerial, technological, organizational, socio-economic and geographical changes brought about by the complexity of the stakes and the challenges to be addressed concerning urban development in the future.

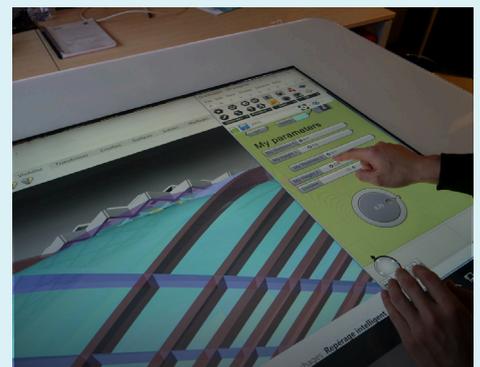
[Learn more at www.list.lu](http://www.list.lu)

Industry

LIST AND EIB COLLABORATE TO OPTIMIZE SMART OFFICE WORKSPACES

LIST and the European Investment Bank (EIB) / EIB Institute have entered into a one-year partnership to increase the latter's operational resilience. They commit to contributing to the EIB Institute's STAREBEI (STAgEs de REcherche BEI-EIB) programme, designed to fund research projects proposed by the EIB group, of which the EIB Institute is a part, under the joint supervision of a university tutor and a co-tutor within the group. Together they will model a digital process for participative decision-making enabling efficient space planning for dynamic and smart office organizations, designing a system that simulates the reorganization of smart workspaces in a building using a participatory approach.

[Learn more at www.list.lu](http://www.list.lu)



WHERE TOMORROW BEGINS

Located at the heart of Belval's Research & Innovation Campus, LIST can easily connect its 600-plus specialists in materials, environment and IT, including its many PhD students, through a broad range of joint research projects, programmes and partnerships with virtually all of Luxembourg's other major research players. At Belval, the University of Luxembourg, LIH, LISER, Technoport, Luxinnovation and the Luxembourg National Research Fund are all literally within arm's reach.

CONTACT

Luxembourg Institute of
Science and Technology

5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette

Tel.: +352 275 888 1
communication@list.lu