

## Health, climate, social science: the “once in a lifetime” moment for data repositories to address the COVID19 emergency

“We must respond decisively, innovatively and together to suppress the spread of the virus and address the socio-economic devastation that COVID-19 is causing in all regions.” - UN Secretary-General António Guterres. Statement issued 31 March 2020. Reacting to the COVID-19 emergency presents the scientific community with a unique opportunity to exploit the power of data across domains and several FAIRSFair partners are playing a strategic role.

The fast-track Working Group on COVID set-up on 30 March 2020 by the Research Data Alliance, for example, is developing detailed guidelines for FAIR data sharing to support scientific research and policy making in public health, with their outputs to be released on 24 April and integrated with allied efforts. These include the OECD use of Open Government Data (OGD) in response to the COVID-19 outbreak, the CODATA ‘Making Data Work for Cross-Domain Grand Challenges’ for launch in 2021 and the Virus Outbreak Data Network (VODAN) launched by the GO FAIR Foundation. The purpose of the latter is to make data accessible for machine learning algorithms, enabling pattern recognition, and thereby contributing to research on new interventions against COVID-19. “The next step of this initiative will be to build a conceptual model for future outbreaks,” says Bert Meerman, Director GO FAIR Foundation.

FAIRSFair supported repositories are also doing significant work. We surveyed them to understand how they were contributing to COVID-19 research, how such involvement would affect their activities in the short or long term, and how the support from FAIRSFair could benefit their activities. –

### -- Climate data --

Clear skies over many large cities in China and elsewhere are witness to the improvement in air quality resulting from a lowering of carbon emissions during the COVID-19 lockdown with its associated travel restrictions.

The ICOS Carbon Portal ([www.icos-cp.eu](http://www.icos-cp.eu)) supports carbon cycle research by providing observations that underpin our knowledge of the Earth’s climate system and how human land use and emissions affect the greenhouse gas budget. Director Alex Vermeulen says the COVID-19 emergency offers a unique opportunity to study how planned CO<sub>2</sub> emissions reductions (30-40% by 2030 and 70% by 2040) will affect atmospheric conditions. He explains, “Our FAIR data repository disseminates all our observations through linked open data in near real time, automatically quality controlled by the ICOS Atmosphere Thematic Centre using strong persistent identification and a clear open data licence. This allows for transparent and reproducible workflows, so that any researcher in the world can use and check our results and can cooperate with our community to achieve the best possible analysis of our data.” With support from FAIRSFair, ICOS hopes to certify its data portal with the CoreTrustSeal certificate by the end of 2020.

Interestingly, for the IAGOS Data Center ([iagos-data.fr](http://iagos-data.fr)) which serves the atmospheric research community primarily through the use of instruments hosted by commercial aircraft, the current situation does not favour data collection. While new data is not being acquired, however, existing

information may very well be serving COVID-19 researchers elsewhere. IAGOS representative Damien Boulanger expects the work done in the frame of FAIRsFAIR to allow the organisation to anticipate and better manage future emergencies.

#### -- Social science data --

Béla Janky of Hungary's Tárki Data Archive (<https://adatbank.tarki.hu/en/>) reports that a survey of social science research institutes is underway to gather information about current or planned research activities related to the pandemic. The results will be disseminated both in Hungary and abroad with support from FAIRsFAIR and the CESSDA community. Similarly, the Data Archive for Social Sciences and the Humanities in Bosnia & Herzegovina, DASS-BiH ([credi.ba/en/dass-bih](https://credi.ba/en/dass-bih)) is preparing two different on-line surveys to explore the consequences of the COVID-19 emergency for the man in the street, particularly from an economic perspective. Says representative Amela Kurta, "These surveys are also implemented in other countries, so the data we collect and archive in DASS-BiH will be used for cross-country comparison."

Read Complete article here: <https://www.fairsfair.eu/articles-publications/data-repositories-covid>

### FAIRsFAIR in a Nutshell

Funded under the H2020-INFRAEOSC-2018-2020 programme of the European Commission

Starting date: March 1, 2019

Duration: 36 months

22 partners from 8 member states

- 6 core partners: DANS (project coordinator), CSC, DCC, Trust IT, STFC, EUA
- CODATA, DATACITE, DTL, e-SDF, UvA, UniHB, SPARC Europe, SURFsara, UGOE, UKDA, UC3M, UNINHO, UH, RDA, INRIA, and CINES.

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