Citizen Science as an Interface between private and public rights

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The affordability of consumer remote digital data technologies offers prospects of elevating and expanding the role of citizens' science in data-driven environmental policy-making. Yet, literature assessing this potential in light of national, European and international legal regimes is scarce. It is important to address this gap, because public uses of citizens' science (e.g. camera trapping) must respect fundamental legal principles, including autonomy, privacy, accountability and transparency. Whereas specific legal and political science literature on *environmental* citizens' science is scarce, legal issues arising from personalized *health* technologies and (private) biobanks have attracted massive scholarly attention. That literature contains invaluable clues for our study, which articulates the legal parameters within which environmental digital data collected for public policy purposes can play its roles. At face value, the flow of data (from the field to scientists, decision makers and public who depend on the information) seem to operate in a regulatory vacuum without clear standards for legitimatization or monitoring. At the same time, existing legal frameworks can create tensions for the use and advancement of citizen science. Particularly relevant here are the EU GDPR Regulation (Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data) and the Arhus Convention on the right of access to information (implemented in Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC). A legal analysis of the relevant instruments is needed to assess how the potential benefits of citizen science for ecology conservation, research and public (local) engagement can be applied. We will focus on the following issues:

- Legal issues related to privacy when digital cameras potentially photograph people;
- Legal tensions between privately held data (in terms of, in particular, property rights and privacy) and high-order social and economic rights (health, environment, education etc.);
- Legitimacy issues arising in respect of governance frameworks for private and public holders of private data (e.g. can data obtained from citizen science be used for policy and in courts?);
- Legal tensions between private rights (expressed for example as (intellectual) property or privacy) and public rights such as access to information (e.g. at what stage does the private become public: does data from citizen science send to public authorities become 'public information'?).

The research will be conducted employing standard law research methodology with an understanding of ecological and environmental dimensions. This foremost consists of the identification and analysis of relevant (in particular EU) legal instruments and provisions, including their interpretation by courts while also taking into account any relevant policy guidance issued by for example the European Commission or other authoritative bodies (such as white papers and toolkits issued by the European Commission Joint Research Center).

The paper will draw upon two case studies regarding air quality in the EU and camera trapping of large carnivores in Scandinavia.