

## Open Research & Knowledge Access Strategy

The KIPT initiative is grounded in the belief that scientific progress must serve the global common good. Accordingly, it embeds a comprehensive Open Research & Knowledge Access Strategy to ensure that all non-sensitive results, methodologies, and technical outcomes from the initiative are transparently disseminated, reused, and advanced by the wider academic and scientific community.

**1. Accessibility of Research Outputs** All non-sensitive technical papers, environmental assessments, and procedural guidelines will be published in open-access repositories such as arXiv, Zenodo, and institutional platforms. Each publication will be indexed with persistent DOIs, metadata standards (Dublin Core, DataCite), and include machine-readable formats to ensure long-term interoperability.

**2. Interoperable Interfaces & Standardization** KIPT will employ open APIs and semantic web standards (e.g., RDF, OWL) to enable automated data access and semantic annotation. Metadata schemas will align with OAI-PMH protocols to foster integration into research databases, especially in environmental science, engineering, and climate modeling.

**3. Modular Open-Source Repositories** Where possible, software, control algorithms, and hardware schematics (e.g., sensor arrays, monitoring modules) will be provided via open-source repositories (e.g., GitHub, GitLab). These will include detailed documentation, revision logs, and licensing terms (preferably MIT or CC-BY-SA) to encourage academic and institutional reuse.

**4. Collaborative Research Frameworks** The project will formalize partnerships with universities and UN research programs under UNESCO and UNEP to facilitate shared pilot studies, co-authored publications, and joint reviews. Research Fellowships may be funded through open calls in underrepresented regions to ensure global participation.

**5. Archiving & Citation Integrity** All datasets will be archived using open-access formats (e.g., CSV, NetCDF) and stored in redundancy-secured data hubs with compliance to FAIR principles (Findable, Accessible, Interoperable, Reusable). Citation guidelines will be enforced to ensure attribution and reproducibility.

**6. Delineation of Sensitive Materials** While transparency is foundational, components tied to critical safety or dual-use technology (e.g., HR module internals, satellite guidance logic) will be redacted from open access. However, sanitized abstracted models will be made publicly available to enable theoretical exploration.

**7. Monitoring & Evaluation** The Open Research framework is subject to periodic review by an independent academic oversight board, comprising representatives from the scientific community, ethics bodies, and data governance institutions. Their mandate includes assessment of openness metrics, bias checks, and proposal of iterative improvements.

This strategy reflects KIPT's foundational mission: fostering global capacity building through equitable access to knowledge, while safeguarding the responsible stewardship of complex technologies.