Technology and Innovation Conclave 2.0

28 - 30 JANUARY, 2026

Artificial Intelligence in Service of Humanity and the Planet

Ministry of Science and Technology
Department of Scientific and Industrial Research

ESCAP
APCTT
Asian and Pacific Centre for Transfer of Technology

RUSSIAN HOUSE OF INTERNATIONAL SCIENTIFIC AND TECHNICAL COOPERATION

Greentech & AI as Strategic Tools

- Digital technologies can play a pivotal role in achieving 70% of the Sustainable Development Goals (SDGs), as well as significantly accelerate progress towards achieving them

National Goal: To achieve technological leadership by saturating key industries with cutting-edge, sustainable technologies as well as transformation of science and technology into a key factor in Russia's development and ensuring the country's ability to effectively respond to appearing challenges

- *the National Strategy for the Development of Artificial Intelligence for the period until 2030*

The Challenge: Climate Risks

Regional Threats: Increased frequency of typhoons in the Far East, droughts, and forest fires across Siberia

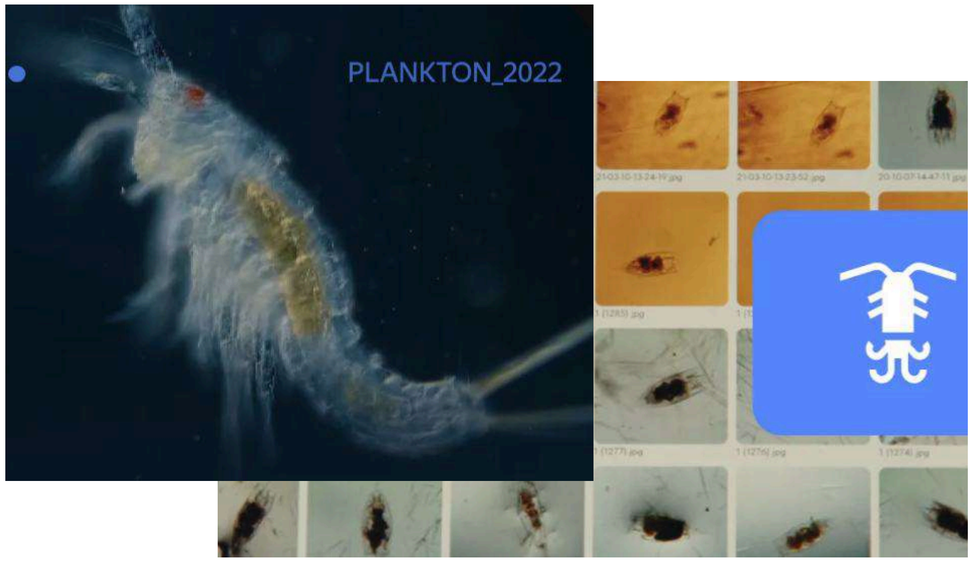
Potential damage to the Russian economy until 2030 could reach 12 trillion RUB. Some regions may lose 5-6% of their GDP

Russia is strategically pivoting to technology-driven adaptation and green innovation as pillars of future economic resilience

Proactive, tech-driven solutions are not optional—they are an economic imperative

AI ecomonitoring of Lake Baikal

Since 1945, scientists have been taking water samples from a depth of 0 to 250 meters at one point of Lake Baikal every week



https://yandex.cloud/ru/special/baikal/#movie

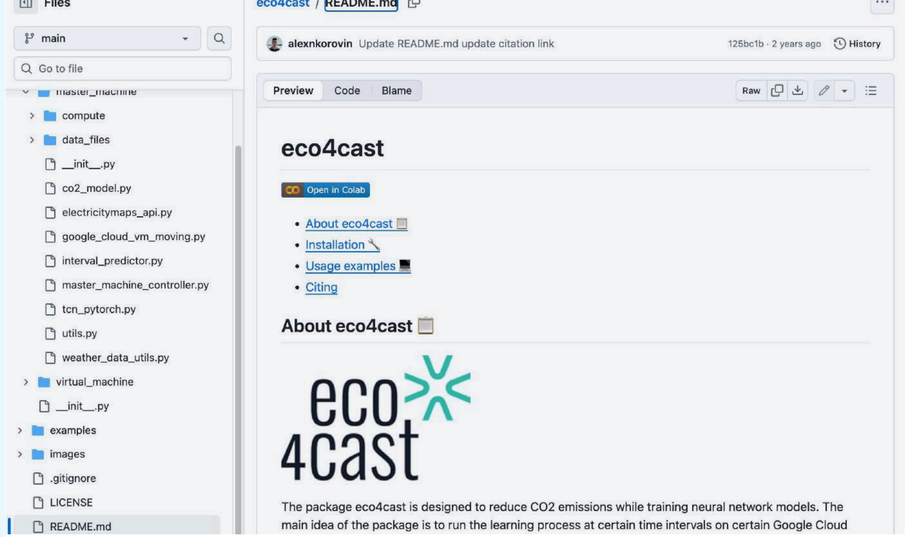
- recognizes the **70** most common plankton species
- the biologists produced 50,000 sample images, **20,000** of which were used to train the algorithms

Now:

- Analysis that took days is now completed in hours
- AI eliminates human error and ensures unprecedented data granularity
- Scientists can now analyze the entire historical and current data array holistically, identifying long-term trends and subtle, previously invisible changes

Eco4Cast Library

The library is intended to monitor the carbon footprint of the AI model training process. It determines available computing resources and calculates how much energy was consumed in the training process, and equivalent CO_2 emissions, taking regional standards into account



eco 4cast

- Abuilt-in neural network analyzes 20+ parameters (weather, grid mix, time of day) to predict the "carbon cost" of electricity in different regions
- Dynamically schedules tasks to run on computing infrastructure in regions with the cleanest energy mix

Key Outcome:

Enables a reduction of indirect CO_2

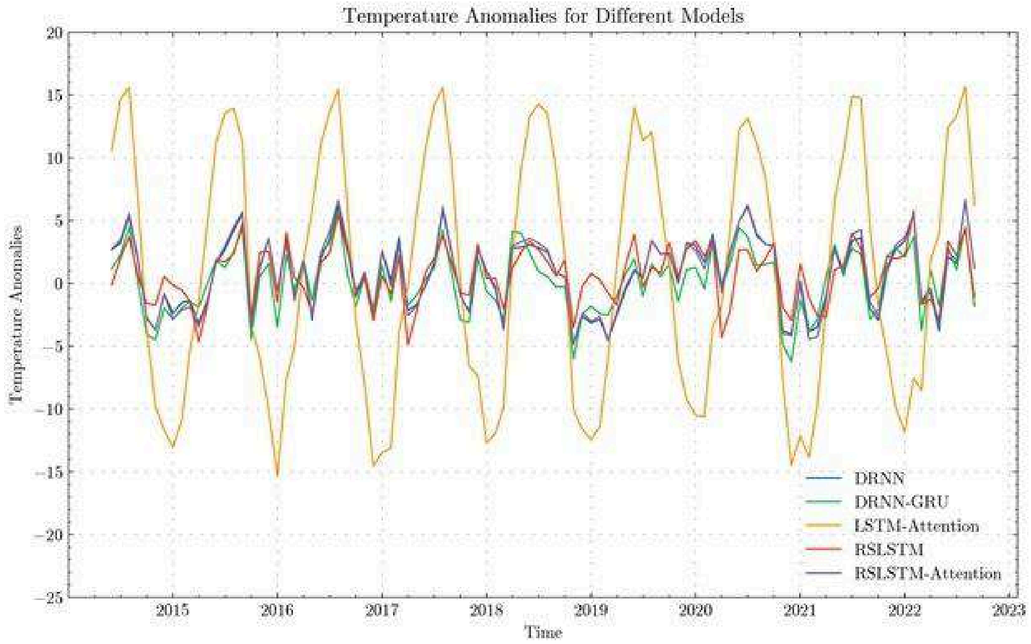
90%↓

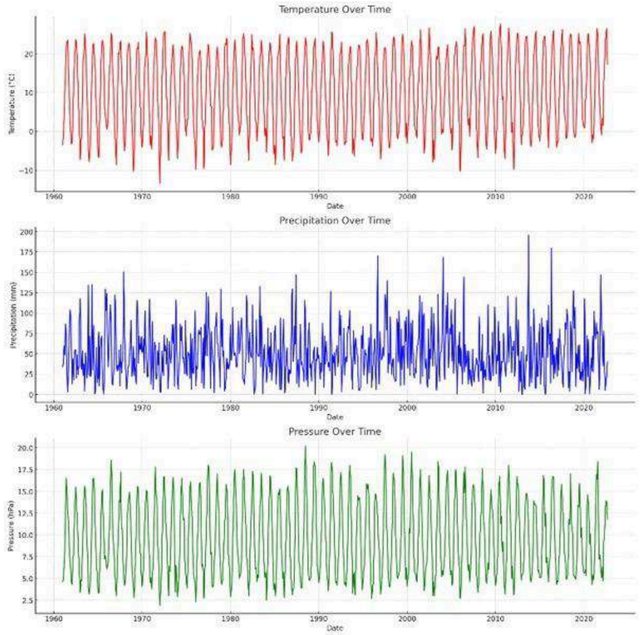
7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

Advancing Climate Science – Breakthroughs in Forecasting

- The architectures of deep recurrent neural networks (DRNN) and DRNN with Gated Recurrent Units (DRNN-GRU)



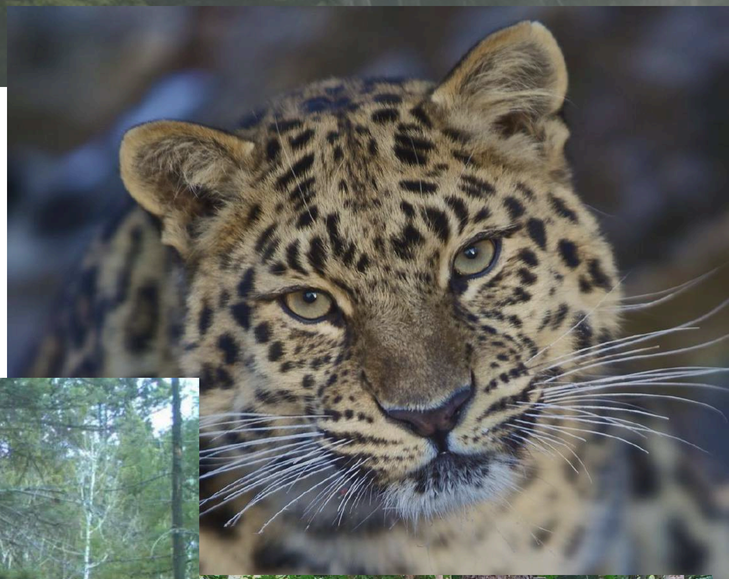


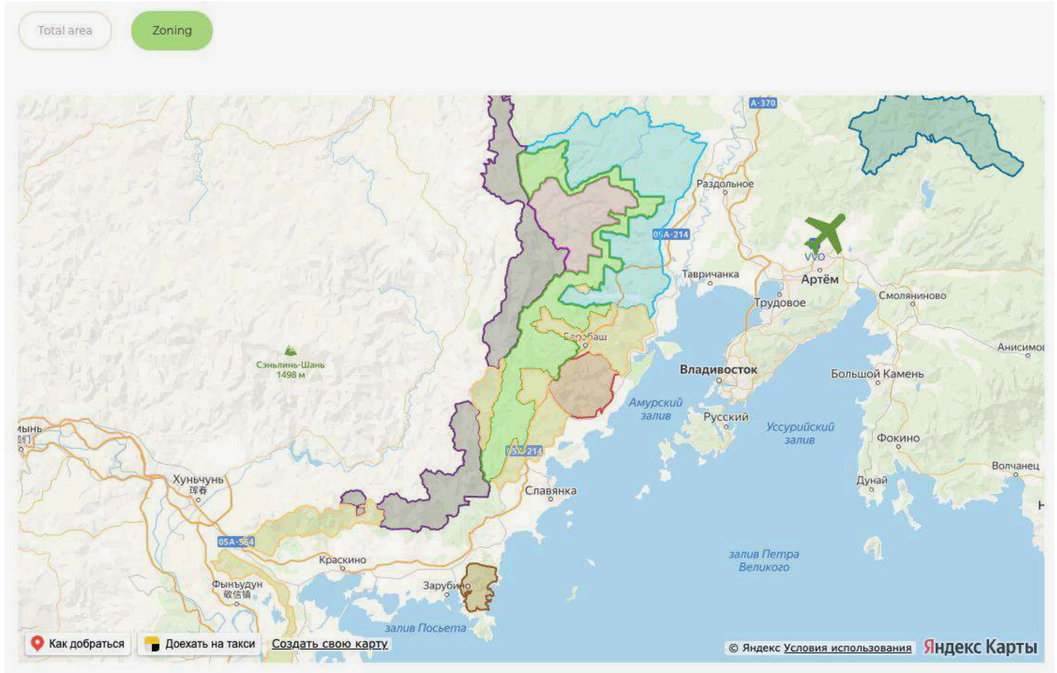
The use these models not only enhances the precision of predictions, but also deepens our comprehension of climate phenomena, which is crucial in the context of global climate transformation

sfedu.ru/news/75800

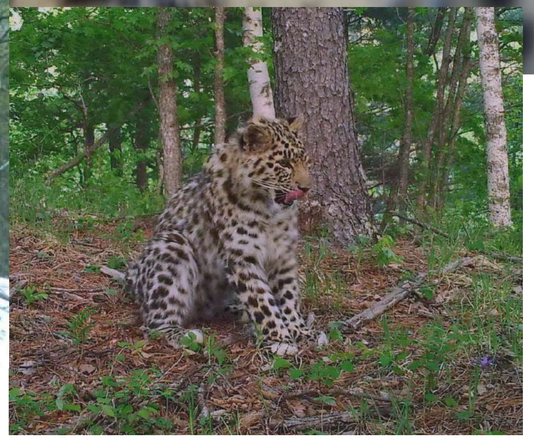
Conservation of biodiversity

In the Land of the Leopard National Park, neural networks automatically recognize Far Eastern leopard and Amur tiger by their unique skin pattern, build maps of their movements and assess the state of the population





https://www.gazetametro.ru/articles/dlja-poscheta-redkih-osobej-obitajuschih-v-natsparkah-primenili-iskusstvennyj-intellekt-24-08-2022



https://leopard-land.ru/?lang=en

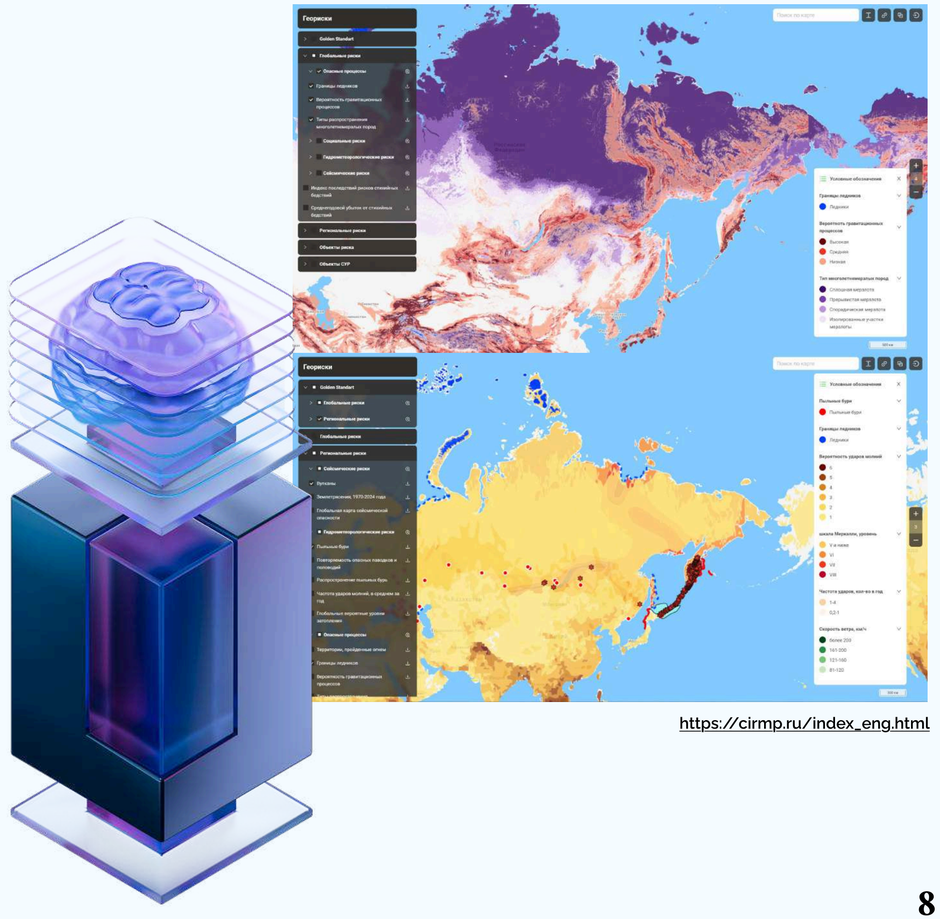
Digital ecosystem for controlling risks and business solutions

PROJECT CIRMP

ROSCONGRESS
RC Complex systems

INSURANCE BROKER

- A Digital Ecosystem integrating global and Russian statistics, international and domestic expertise
- A Real-time Risk Management System for analyzing diverse processes, from production chains to environmental hazards
- An Applied Solution designed to increase efficiency, productivity, and reduce unplanned costs

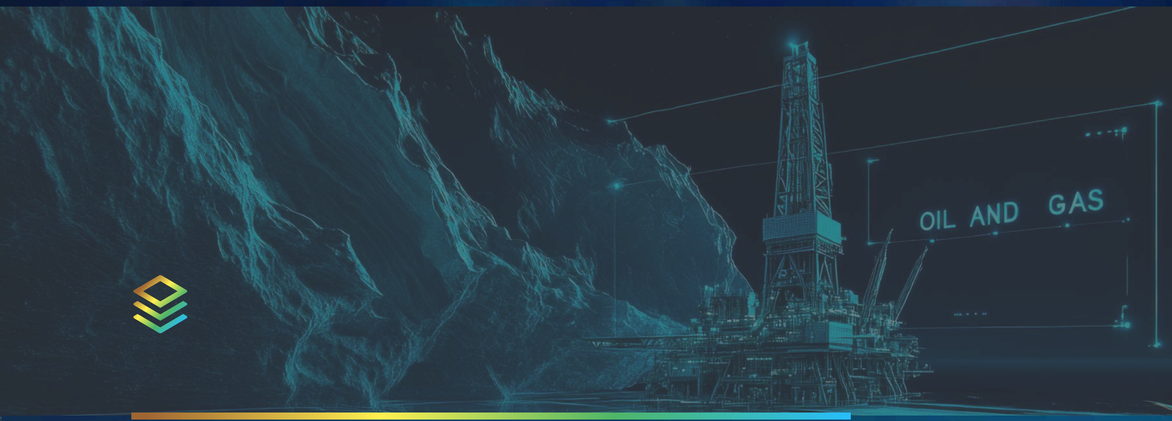


https://cirmp.ru/index_eng.html

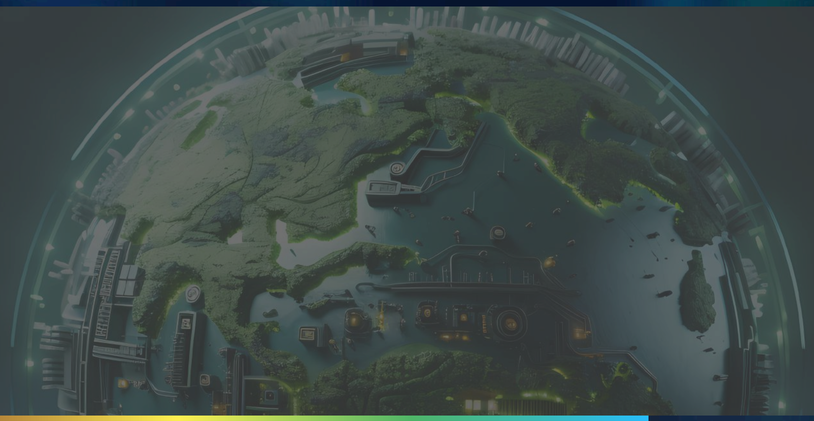
AI for a Sustainable Future

- From Pilots to an Ecosystem: Russia's green AI technologies are evolving into a unified national ecosystem, driven by state policy and business demand

A Tool for Transformation: AI is becoming the critical link between scientific knowledge, industrial practices, and environmental imperatives



A Digital Framework for Action: From Baikal to the Arctic, AI provides the foundation for precise monitoring, forecasting, and conservation



Contributing to the Global Agenda: Russia's experience in applying AI for climate adaptation is a valuable contribution to the worldwide fight against climate change

Thank you for your attention!

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