Environmental Efforts

NEC works to reduce the environmental impact of its business activities throughout the entire supply chain and strives to create social value from an environmental perspective via solutions to customers.

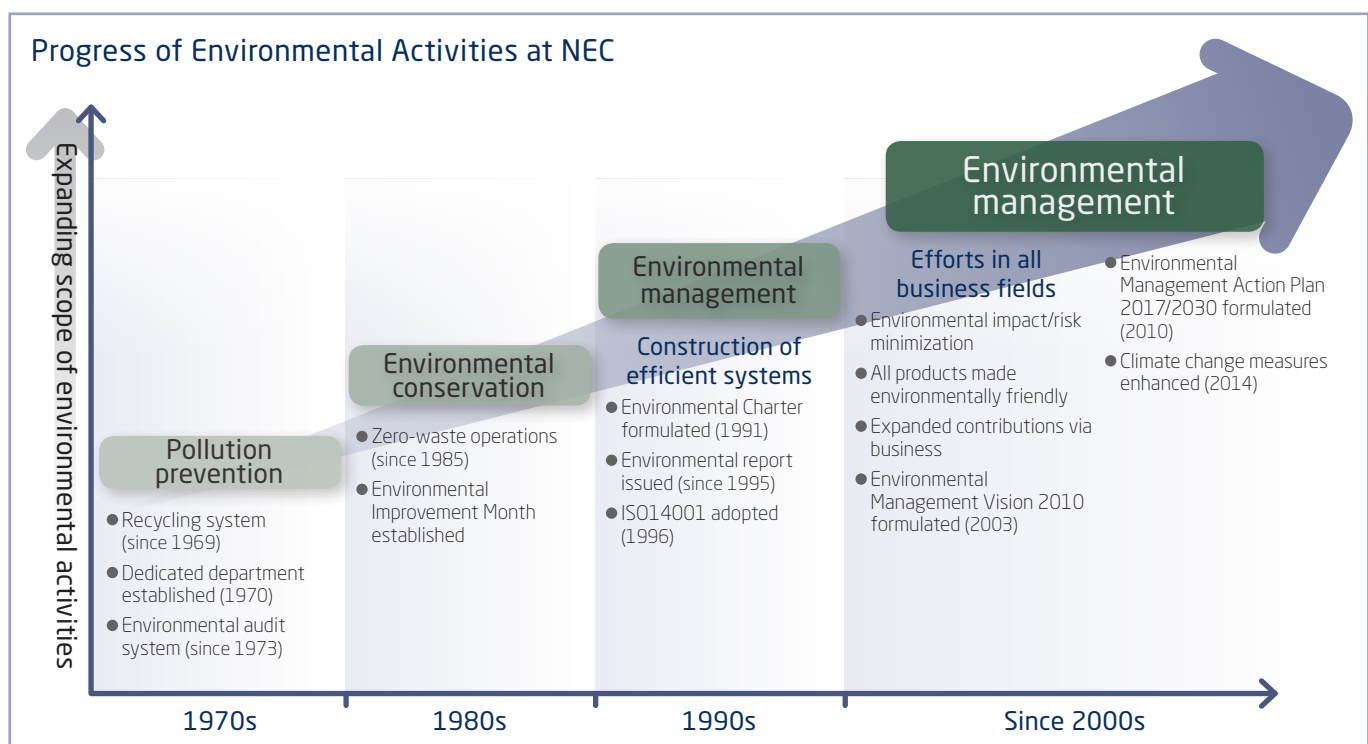## Environmental Management and Responsibility at NEC

Two international agreements regarding the conservation of the natural environment were made in 2015. One was the Sustainable Development Goals (SDGs) of the United Nations. The other was the Paris Agreement made at the 21st Session of the Conference of the Parties to the United Nations (UN) Framework Convention on Climate Change (COP21). Both economics and the global environment are essential for achieving these agreements' goals. The main goal of environmental management focused on by NEC is to solve the various issues around the world to enable society to develop. NEC will continue to create maximized solutions for the targets the world aims for in order to provide the benefits provided by safety, security, efficiency, and equality.

The Evolving Environmental Management of NEC

The environmental activities of NEC started in earnest in 1970, when a dedicated environmental organization was established. The president at the time had a strong awareness of corporate responsibility regarding the environment and declared both internally and to the public that NEC would actively pursue the things it should do for the environment. That was an advanced idea for a company at the time. Since then, NEC has engaged in a wide range of activities while always looking one step ahead.
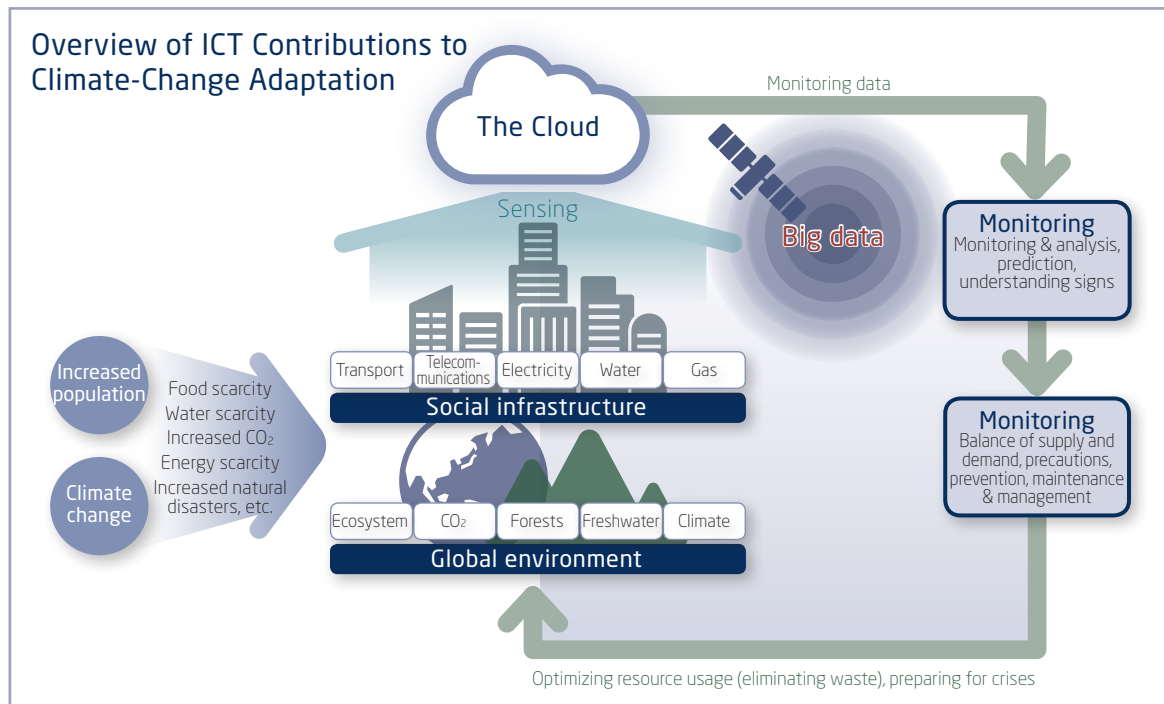
The NEC Environmental Management Vision 2010 announced in 2003 set forth a meaningful environmental vision. Since then, NEC has promoted the contributions that ICT can make to reducing the CO_2 emissions of society as a whole. In 2009, this vision was expanded to include efforts to protect ecosystems, biodiversity, and the recycling and conservation of resources. Moreover, 2014 saw the formulation of long-term goals to enhance climate-change measures. We are therefore proceeding with environmental management that is an inseparable part of our business.

Progress of Environmental Activities at NEC

Expanding scope of environmental activities

Pollution prevention
- Recycling system (since 1969)
- Dedicated department established (1970)
- Environmental audit system (since 1973)

Environmental conservation
- Zero-waste operations (since 1985)
- Environmental Improvement Month established

Environmental management

Construction of efficient systems
- Environmental Charter formulated (1991)
- Environmental report issued (since 1995)
- ISO14001 adopted (1996)

Environmental management

Efforts in all business fields
- Environmental impact/risk minimization
- All products made environmentally friendly
- Expanded contributions via business
- Environmental Management Vision 2010 formulated (2003)

- Environmental Management Action Plan 2017/2030 formulated (2010)
- Climate change measures enhanced (2014)

1970s　　1980s　　1990s　　Since 2000s

Implementing Climate Change Measures for Both Mitigation and Adaptation

NEC investigates what kind of social value its unique technologies and solutions can provide to further enhance conventional environmental management by focusing on mitigation. Last fiscal year, climate-change adaptation was added to our main pillars of environmental management. NEC believes that collecting data on the ever-changing status of everything, including the environment and social infrastructure, and performing big-data analysis enable major changes to be predicted and help lead to appropriate measures. These activities contribute to achieving a safe and secure society. Comprehensive value can also be provided to address the global problem of climate change by promoting adaptation via our social-solution business while further reducing CO_2 emissions.

Overview of ICT Contributions to Climate-Change Adaptation

The Cloud

Monitoring data

Sensing

Big data

Monitoring
Monitoring & analysis, prediction, understanding signs

Monitoring
Balance of supply and demand, precautions, prevention, maintenance & management

Increased population

Climate change

Food scarcity
Water scarcity
Increased CO_2
Energy scarcity
Increased natural disasters, etc.

Transport | Telecom-munications | Electricity | Water | Gas
Social infrastructure

Ecosystem | CO_2 | Forests | Freshwater | Climate
Global environment

Optimizing resource usage (eliminating waste), preparing for crises

Evolution in Environmental Management

With the growing prevalence of the IoT, the overall environmental impact of society is being reduced with more efficient distribution and less waste due to the improved accuracy of supply and demand. This has a great effect on mitigation. NEC is creating the Kobe Data Center with energy-saving capabilities that are among the best in the world. It will start operations in the next fiscal year and further reduce the power consumption of ICT.

In terms of adaptation, NEC is proceeding with the introduction of disaster-prevention systems (particularly in Asia) to deal with natural disasters, which are becoming more severe due to climate change. These systems contribute to creating a society in which people can live safely and securely. Moreover, utilizing SX-ACE vector supercomputers is expected to help solve global environmental problems, shed light on the mechanisms that cause tectonic activity and earthquakes, and predict and deal with natural disasters. Such efforts enable NEC to steadily increase the value that it provides in terms of both mitigation and adaptation.

NEC is also proceeding with the reduction of environmental impact throughout its entire supply chain. For example, energy savings of approximately 50% were achieved when renovating Building 9 of the NEC Tamagawa Plant by adopting a state-of-the-art ICT solution for saving energy and electricity. This knowledge on saving energy has also enabled NEC to both help its business partners save energy and to provide solutions that reduce the environmental impact of its customers.