SUSTAINABLE USE OF ENERGY SOURCES

IN SHORT

- Renewable energy
- Energy effiency in production
- Energy saving innovation

EXAMPLES

- Improve technology for more effective utilization of renewable energy, e.g., in solar cells
- Use of sensors to achieve optimal production of goods
- Reduce energy consumption (smart energy systems, energy effective electronics)
- Reduce energy consumption for data storage, internet search etc.

7 REN ENERGI TIL ALLE

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13 STOPPE KLIMAENDRINGENE

REASONABLE USE OF MATERIALS AND RESOURCES

IN SHORT

- Dangerous and rare materials
- Using less materials
- Conflict-creating use of resources

EXAMPLES

- Dumping of electronics: A lot of electronics contain substances which is harmful to health, like e.g., lead and mercury.

- Urban mining – recycling of smart phones. Trying to extract the valuable substances, e.g., gold.

- Choose materials and resources which can be recycled or reused.

- Avoid use of materials and resources which lead to conflicts

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15 LIVET PÅ LAND

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CONSEQUENCES FOR BIODIVERSITY AND WILDLIFE

IN SHORT

- Animals on land and in the ocean

- Habitat disturbance

- Loss of nature

EXAMPLES

- Marine acoustics: noise affects the wildlife

- Wind turbines and hydropower affects nature and wildlife

- Sensor systems for wildlife monitoring

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14 LIVET I HAVET

15 LIVET PÅ LAND

GOOD WORKING CONDITIONS

IN SHORT

- The technologist's responsibility for reflection

- Fair wages

- Focus on the worker's health

- End poverty

EXAMPLES

- Choice of production site
  - Will it lead to conflicts in the country of origin?
  - Can the work lead to health consequences?
  - Are the workers getting fair wages?
  - Is child labor used?

- Digital tools for improvement of working conditions

EQUALITY AND UNIVERSAL DESIGN

IN SHORT

- Anti-racist technology

- Gender
  neutral technology

- Inclusive innovation

- Disability adaption

EXAMPLES

- Artificial intelligence for everyone: equal precision regardless of gender, complexion, ethnicity, etc.

- Recognition algorithms: perform better on white men than women of color

- Misuse: Huawei and face recognition for surveillance of Uighurs

- Self-driving cars: Who is prioritized in a conflict in traffic?

- Equality in teaching: examples that appeal to both sexes, gender distribution among lecturers

4 GOD UTDANNING

5 LIKESTILLING MELLOM KJØNNENE

10 MINDRE ULIKHET

11 BÆREKRAFTIGE BYER OG SAMFUNN

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CIRCULAR ECONOMY

IN SHORT

- Use of raw materials
- Design, production and distribution
- Consumption
- Reuse, recycling and waste
- Environmental accounting

EXAMPLES

- Design new electronics which need less resources in production and distribution
- Facilitate repair and increase the lifetime of products to reduce consumption
- Design products which can be recycled and reused
- Analyze the value chain of electronics to do environmental accounting for minimizing of environmental footprint

CONSEQUENCES FOR HUMANITY

IN SHORT

- Local and global societies
- Individual impact
- Health impact
- Society and communication
- Consumption patterns

EXAMPLES

- Dumping of electronics in low-income countries may lead to negative impact on the locals' health
- Social media's impact on mental health
- Positive consequence of digitization: digital socializing during the Covid-19 pandemic
- Online surveillance, hacking, etc.
- Consider the social consequences of technology: toll roads, position applications on mobile apps, internet algorithms

1 UTRYDDE FATTIGDOM

2 UTRYDDE SULT

3 GOD HELSE OG LIVSKVALITET

4 GOD UTDANNING

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LIMITATIONS OF HARMFUL EMISSIONS

IN SHORT

- In the air, on land and in the ocean

- During production

- During consumption

EXAMPLES

- Promote local production to reduce transport distance when distributing goods

- Sensor systems for environmental surveillance can detect and prevent pollution

- New battery technology can facilitate transition to emission-free societies

- Limit harmful waste under production: e.g., hydrofluoric acid for solar cell production

IMPACT ON INFRASTRUCTURE

IN SHORT

- Organizational, physical and digital infrastructure

- Aids in health and education

- Digital interaction

- Innovative cities and industries

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17 SAMARBEID FOR Å NÅ MÅLENE

EXAMPLES

- Automation and robotics streamline urban societies and promotes more sustainable transport: electric cars, self-driving busses and ferries

- New technology change the job market: self-checkouts, robotized industry

- Sharing society: develop an app which facilitates for car sharing

- Digital communication reduces travelling and improves community services: e.g., Digipost, online banking, Skype

- Digital tuition and lectures

- Medical technology improves health services