

Iceland – Integrating Technology, Needs, and Responsibility For Sustainable Living

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Dedicated to Team Daedalian

And 1 car 1

Overview of Topics:

- Iceland's Identity
- Industries
- Land Development
- Iceland's Resources
- Biota – plants, animals, and fish
- Image – tourism and the economy
- The Government and Energy Plan
- Pollution
- Iceland – Today and Tomorrow

Iceland's Identity:

- Energy Independence
- International acceptance of venture
 - Money
 - Infrastructure
- Ministry of the Environment
- Tradeoffs
 - Power Plants

Industry

- Fishing
- Natural Resources
- Land
- Encourage Business Investment

Besides



- Aluminum Smelting
- Ferrosilicon
- Renewable Energy
- Software, Biotech

Land Development

- Birth to death ratio ~ 2+
- Alcoa and the East
- Job Creation
- Maintain clean image

Iceland's Resources:

- Iceland is a geologically young land mass
 - 2 million years old.
 - Lacks conventional resources
- Oil issues
 - 90% of citizens live on the coast
 - High monetary cost
 - Economic fishing zone
- Abandoning oil

Iceland's Past:

- Clean and Untouched
 - Current reputation that transcends all sectors
- Dirty Past
 - Answered to “The Man” at one time
- Willingness to change
 - Vulnerability

Biota

- Destructive past
 - Birch Forests
 - Wetlands
 - Red listed
 - 51 / 458 vascular plants types
 - 32 / 75 birds types

Mammals

- Arctic Fox
- American Mink
- Water Rail (mink and wetland draining)

Fish

- Most important resource
- “For the fish”

Land

- Land pollution affects marine environment
- Untouched to save what remains
- Rewetting the “Dry lands”
- National Parks , pride, and aluminum

Iceland's Image:

- Tourism
 - Clean and unspoiled
 - Outnumbering
- Fishing
 - Before geothermal there was fishing...
 - VALUABLE RESOURCE
 - 70% of exported goods
 - Stringent regulations
 - Cod, haddock, saithe, redfish, herring, and capelin.

Iceland's Image:

- High Standard of Living
 - Decoupling of economics and environmental degradation
 - Virtually no poverty
- Street Interviews
 - Government Agencies
 - Citizens
 - Willingness to pay! Can you believe it?

Iceland's Image:

- The Blue Lagoon
 - “Hottest” tourist attraction
 - Geothermal power plant affluent
 - Compare to U.S.A.
 - Not in the master plan
 - Profits in the end.

Government:

- Not of U.S. tradition
- Althingi – 930.
 - Thingvellir
 - Mid Atlantic Ridge
- 1944 – Republic of Iceland
 - Dissolved relations with the Danish Monarchy

Government – fishing rights:

- Transitions
 - Trade monopolies, natural disasters, and pollution
- 1952
 - Extent of fishing rights were 4 miles off the coast
- Today
 - 200 miles off the coast

Government:

- Still not a part of the European Union
 - Fishing right impingement fears
- Part of the European Economic Area
 - Allowed to trade and sell in the European arena

Energy Plan:

- Government regulates the energy industry
- 90% of heat
 - Thorsteinn Jonsson
- Clean and Price Competitive
 - 5-6 Kronas 1 Krona= .01318 USD
 - Equivalent to 6.6 to 7.8 cents per kWh
 - U.S. pays 4 to 9.5 cents
- ISO 14000

Energy Plan:

- Hydrogen Economy is coming!
 - 15, 470 barrels of oil
 - Time
 - Infrastructure
 - Embracing
 - Transition in recent memory

Environmental Plans:

- Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem
- United Nations Convention on the Law of the Seas
- United Nations Global Program of Action

Pollution

- Marine pollution comes from the land
 - Sewage → Low commitment
 - Persistent Organic Pollutants ***
 - PCB, DDT, HCH
 - Industry, agriculture
 - Stockholm Convention, PCB, dioxins

Pollution

- Heavy Metals
 - Pb, Cd, Cu, Zn
 - Cod, mussels
- Radioactive Substances
 - Testing
 - Sellafield nuclear reprocessing
 - Chernobyl
 - Medicine

Pollution

- Oil
 - Unreported
 - Utilize renewable Energy

Hydrogen Economy

- Transportation ~ 80% oil
- Icelandic Hydrogen and Fuel Cell Co.
 - 3 buses 80
- H₂ generation → Electricity can supply 22% needs
- Plenty of room to expand

Iceland Today and Tomorrow:

- Taking away subsidies
- Kyoto Protocol
 - Eliminate transportation emissions
- U.N. Convention on Bio-Diversity
 - BIOICE
- OECD
 - Sustainable development

Iceland Today and Tomorrow:

- Geothermal Training Program
- Leader in environmental conservation
- Is Iceland ahead of its time, or is the rest of the world just really behind?