Finnish Institute of Occupational Health (FIOH)
FIOH

- Research and specialist organization in the field of occupational health and safety
- Independent institute under public law and operating in the administrative sector of the Ministry of Social Affairs and Health
- Tripartite Board of Directors
  - Ministry of Social Affairs and Health
  - Ministry of Employment and the Economy
  - Trade Unions and employer organizations
- Clients
  - Workplaces, citizens, government officials, occupational health services (OHS), occupational health & safety personnel, and other organizations developing and promoting well-being at work
Figures

- Founded in 1945

- Total budget for 2015: approx. 63.3 million €

- State funding covers 53% of the budget

- 47% raised through own operations
  - external research funding
  - income from services, training and information

- Personnel
  - approx. 620 person-years

- Locations: Helsinki, Oulu, Kuopio, Tampere and Turku
FIOH’s strategy 2015-2020

• One of the five focus points is **Well-being in the Arctic work**

• Its objectives are:
  • To become a strong participant in the co-operative network
  • To ensure that the structures and operating methods of Arctic work are sustainable
Work in the cold

• Important topic of FIOH’s research from 1976
• Components:
  • Health effects
  • Working capacity and recovery
  • Protection against cold
  • Use and compatibility of personal protective equipment
• Research is carried out
  • In working places
  • In experimental set-ups in laboratories
• Research has focused on
  • The general features of work in the cold
  • Different sectors of industry
Special laboratories for Arctic research

Laboratory of Physiology, Oulu
- Two climatic chambers (-40 ... 65° C)
- Wind tunnel (-45 ... 60° C, laminar wind 10 m/s)
- Immersion pools
- Laboratory of physical performance
- Extensive instrumentation for measuring human thermal, neuromuscular, cardiovascular, respiratory and energetic responses, working capacity and recovery

Laboratory of clothing, Oulu
- Two climatic chambers (-40...35° C) with wind (0...20 m/s) and whole body vibration
- Two thermal manikins: standing/walking and sitting
- Physical hand, foot and head thermal models
- Measurements of textile properties
Accredited laboratories for testing personal protective equipment (PPE)

**Notified body 0403**
- EC type-examination, sertifications
- EC quality assurance for finished products (PPE Directive, Article 11A)
- EC quality assurance for production (PPE Directive, Article 11B)

**Selection of tests**
- Diving suits (FIOH Helsinki)
- Immersion suits (FIOH Oulu & Helsinki)
- Lifejackets (PFDs) (FIOH Helsinki)
- Protective clothing and gloves (FIOH Oulu)
- Safety and protective shoes (FIOH Helsinki)
- Eye and face protectors (FIOH Helsinki)
- Hearing protectors (FIOH Helsinki)
- Respiratory protective devices (FIOH Helsinki)
- Protective devices against fall from a height (FIOH Helsinki)
International collaboration in Arctic and cold research

- International research and development projects
- ISO (International Organization for Standardization)
  - Human responses in thermal environments
  - Clothing
- ICOH (International Commission on Occupational Health)
  - Thermal Factors Scientific Committee
- Arranging conferences and meetings
- Publishing *Barents Newsletter on Occupational Health and Safety*
- Professional networks
National collaboration in Arctic and cold research

With most Finnish Universities
• Especially with University of Oulu, Tampere University of Technology, University of Lapland, University of Jyväskylä

With research institutes
• Especially with FMI, THL, VTT

In national standardization organizations
• MetSta, TEVASTA, Oil and Biofuels (Öljy ja Biopolttoaineala)

Team Arctic Finland

ArcMaTe (Arctic Marine Training and Testing Center)
• Planning together with Oulu University
Main interests for joining the University of the Arctic

• FIOH has already a wide network with universities and research institutes
• FIOH’s strategy 2015-2020 further encourages FIOH to join to the University of the Arctic network
• FIOH aims to enhance the research and visibility of working life in the Arctic
• FIOH is interested in increasing the education in the field of Arctic occupational health and safety