**Understanding mountain soils - a contribution to the International Year of Soils 2015**

**Foreword**

**Introduction** (why soils are important, why we have an International Year of Soils)

1. **Soil variability in mountain areas**

*Soil forming factors in mountain areas*

*The concept of pedodiversity in mountain areas*

*Soilscapes and soil sequences*

*The difference between mountain and lowland soils (including constraints)*

*Forest soils*

*High-elevation soils*

*Wetland and Organic soils*

1. **Mountain soils and ecosystem services**

*The connection between mountains and lowlands*

*Provision of services*

*Food*

*Timber/Energy production*

*Water quantity and quality*

*Biodiversity/Genetic resources*

*Regulating services*

*Climate*

*Air quality*

*Nutrient*

*Compensation for ecosystem services*

1. **Mountain soils and agriculture**

*Climate smart agriculture*

*Conservation agriculture and traditional practices*

*The relationship between forestry and soils*

*The relationship between livestock and soils*

*Land reshaping and terraced landscapes*

1. **Mountain soils and food production**

**Author missing**

*Mountain viticulture*

*Soft fruits production*

*Aromatic and medicinal plants*

*Cheese production*

*Indigenous crops and livestock products*

1. **Mountain soils and human activities**

**Author missing**

*Transport*

*Infrastructures*

*Mining*

*Tourism and ski slopes*

*Migration and transhumance*

*Wars Heavy metals pollution*

1. **Mountain soils and threats**

*Soil loss in mountain environments: estimation methods*

*Snow avalanche and soil erosion*

*Overuse and degradation*

*Water scarcity and desertification*

*Preparedness and risk management*

*Best practices*

1. **Mountain soils and climate change**

*Soil carbon stock*

*Soil genesis in recently deglaciated areas*

*Snow cover changes and nutrient cycling*

1. **Mountain soils and cultural heritage**

*The social and cultural value of soils*

*Paleosols as witnesses of the past*

**Conclusions and way forward**

*(management approach, capacity development, policy recommendations, …)*

*References*