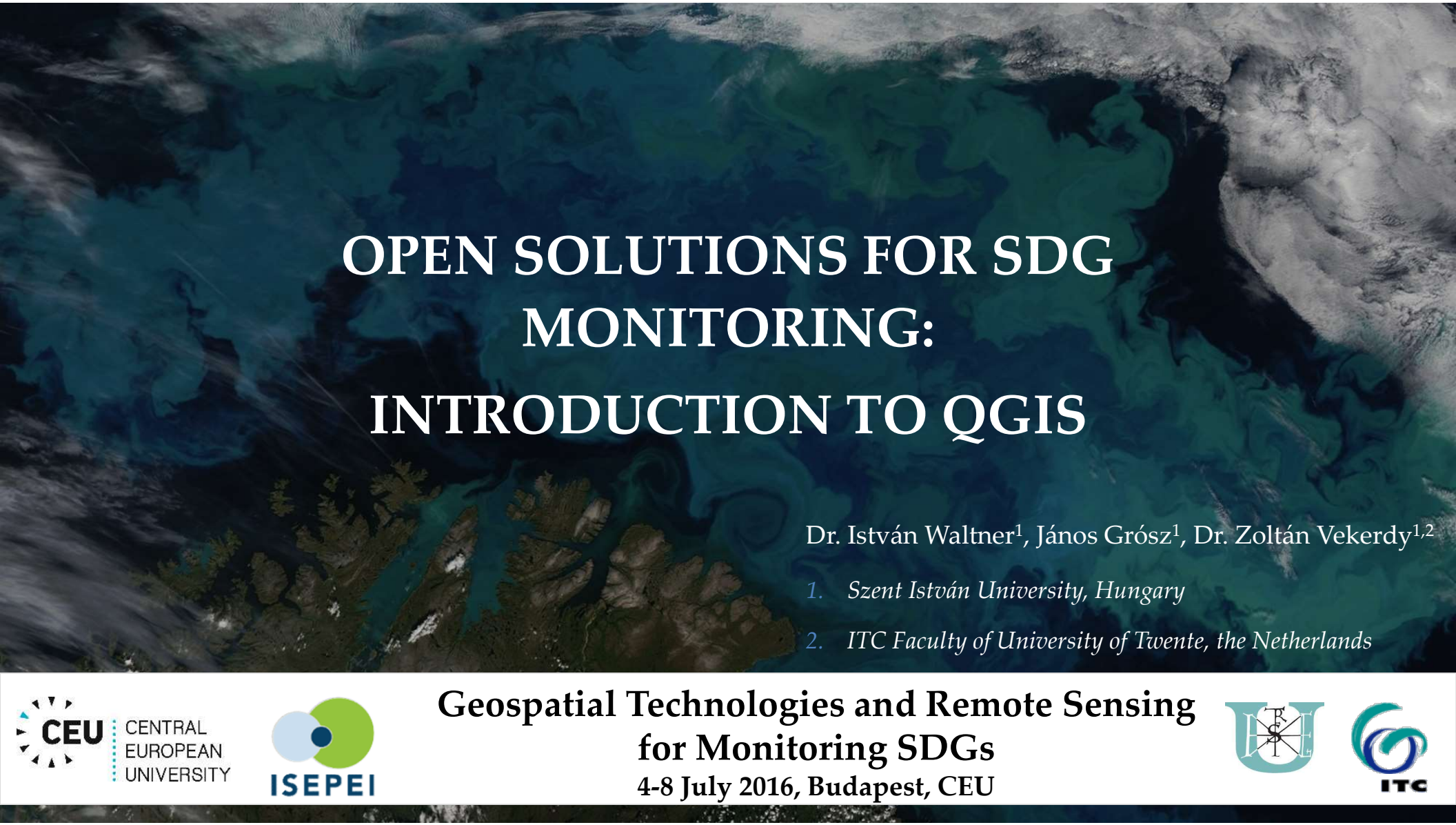

OPEN SOLUTIONS FOR SDG MONITORING:

INTRODUCTION TO QGIS

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CEU CENTRAL EUROPEAN UNIVERSITY

ISEPEI

Geospatial Technologies and Remote Sensing for Monitoring SDGs

4-8 July 2016, Budapest, CEU

ITC

Structure of the presentation

- SDGs
- Clean water and sanitation (SDG 6)
- Open source GIS
- QGIS
- Case study area

SDGs VZ(4

- SDGs: quantitative objectives across social, economic an environmental dimensions of sustainable development.

Slide 3

VZ(4 We do not have to talk about this too much, since this is tackled by more professsional guys before us...
Vekerdy, Z. (ITC), 7/3/2016

SDG 6 – Clean water and sanitation

- VZ(3
- GIS can be used similarly in many other SDGs.
- Major monitoring tasks for GIS:
  - Water quantity
  - Water quality
  - Identification of problems (pollution, water use etc.)
  - Decision support tool for optimal solutions

VZ(3 Major monitoring tasks

Vekerdy, Z. (ITC), 7/3/2016

What does ″open-source″ mean?

″…something that can be modified because its design is publicly accessible.″

A set of values:

- open exchange
- collaborative participation
- rapid prototyping
- transparency
- meritocracy
- community development

(Source: opensource.com)

Open-source vs. proprietary software

- User control
- Security
- Stability
- Support
- Price

Open-source GIS

- Projects since the 1970's can include:
  - Desktop GIS
  - GIS tools
  - Spatial database management systems
  - Web-based applications
  - Software development frameworks

Some notable examples of open-source desktop GIS

- GRASS
- QGIS
- SAGA GIS
- ILWIS

- Further information:
  - www.osgeo.org
  - www.freegis.org
  - www.opensourcegis.org

QGIS (formerly QuantumGIS)

- Desktop GIS, with an easy to use interface
- Licensed under the GNU General Public License
- An official project of the Open Source Geospatial Foundation (OSGeo)
- It runs on Linux, Unix, Mac OSX, Windows and Android
- Supports a large array of data formats
- http://www.qgis.org

The case study area: Lake Uromiyeh, Iran

- Hypersaline lake located at the NW of Iran.
- Its basin covers about 54000 km^2 and climate is semi-arid,
- Average annual rainfall of about 350 mm/year (250 at the lake, 1200+ in the mountains).
- Shallow lake (6-8 m deep – when it is full) and has no outflow.

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