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Surveying the Earth to Create the Future

# Integrated Geospatial Information for Sustainable Land Development in Tirana- Durrës Area in Albania

JICA TA: Digital topographic mapping and capacity building of ASIG for utilization, maintenance  
and updating ability – 2017

by

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# Introduction

Unplanned rapid urbanization was creating severe pressure on urban infrastructure and environment, particularly due to concentration of population in & around Tirana-Durres area

- ✓ Lack of Infrastructure : Transportation, Water Supply, Wastewater and Solid Waste Management.
- ✓ Problems with Property Registration
- ✓ Improper and Unplanned Development

Countermeasures :

- ◆ National General Plan for Territory of Albania
- ◆ Integrated Plan of Tirana-Durres Area

Geospatial Information are indispensable. However, ...

- No New Large Scale Digital Topographic Maps
- Limited Technologies and the Experienced Engineers

# Objective of the Project

- Creation of 1/2,000 Digital Topographic Maps of Tirana-Durres area
- Capacity Building & Technology Transfer for Data Creation and Quality Control of the State Authority for Geospatial Information (ASIG)

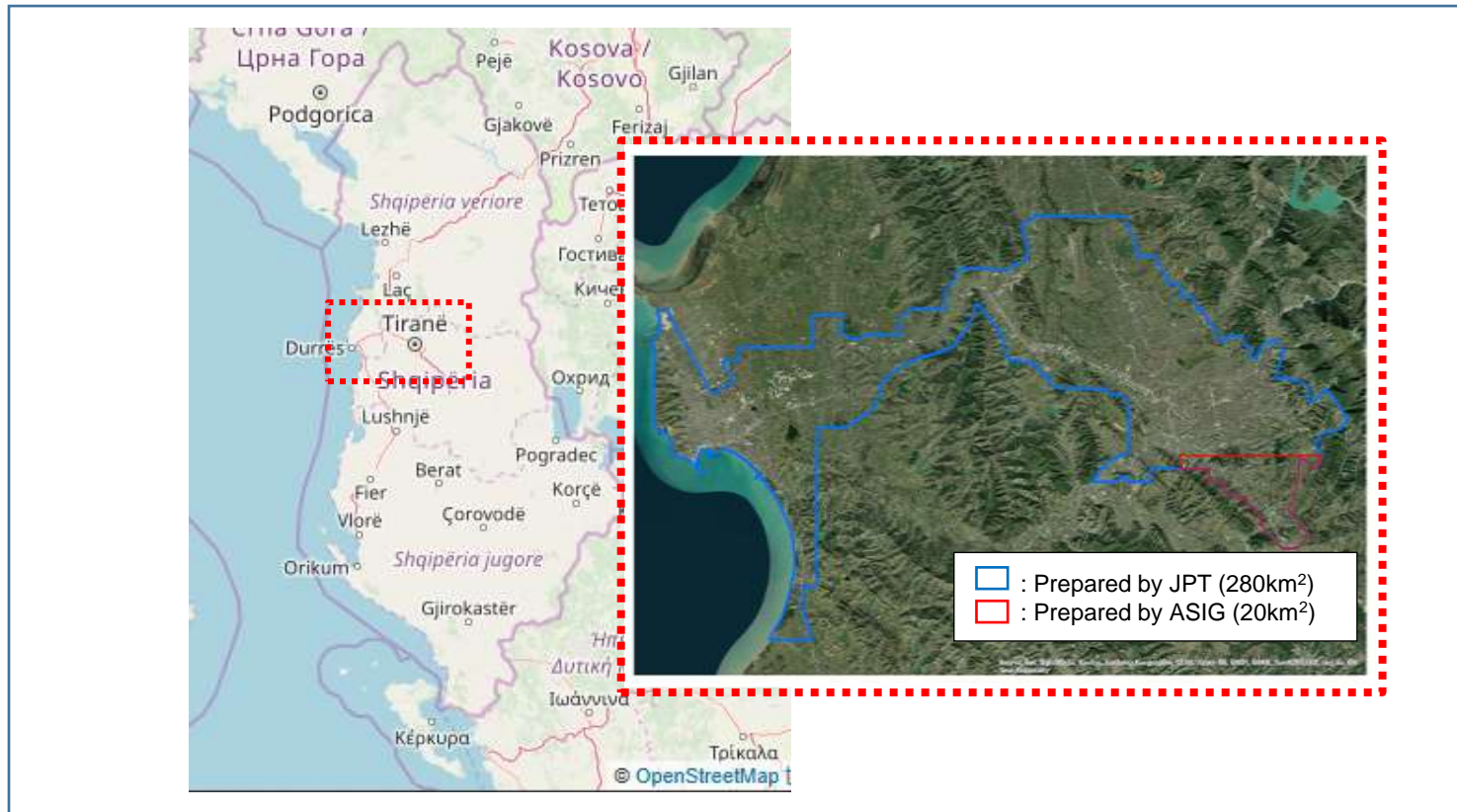


Figure 1: Location of the Project Area (Source of the Project Area: JICA Project Team (JPT), Source of the background: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community)

# Key Technology

- Compliance with EU INSPIRE directive and Albanian standard for Geographic Information (Table 1)
- Utilization of CORS for Establishing GCPs
- Efficient Geospatial Information Management and Sharing Mechanism (Fig. 2)

Table 1: Features of the Digital Topographic Map

No	Basic dataset name (Theme)
1-03	GN (Geographical names)
1-04	AU (Administrative units)
1-07	TN (Transport networks)
1-08	HY (Hydrography)
1-09	PS (Protected sites)
2-01	EL (Elevation)
2-02	LC (Land cover)
2-04	GE (Geology)
3-02	BU (Buildings)
3-06	US (Utility and governmental services)
3-08	PF (Production and industrial facilities)
3-09	AF (Agricultural and aquaculture facilities)
4	AS (ASIG) *Cartographic features defined in addition "Religious Feature", "Transport Feature", "Fence Feature" and so on

Source: albatopo2000 (ASIG and JICA, 2018)



Figure 2: The Orthophoto Displayed on ASIG's Geoportal (Source: ASIG)

# Working Framework, Capacity Building & Technology Transfer

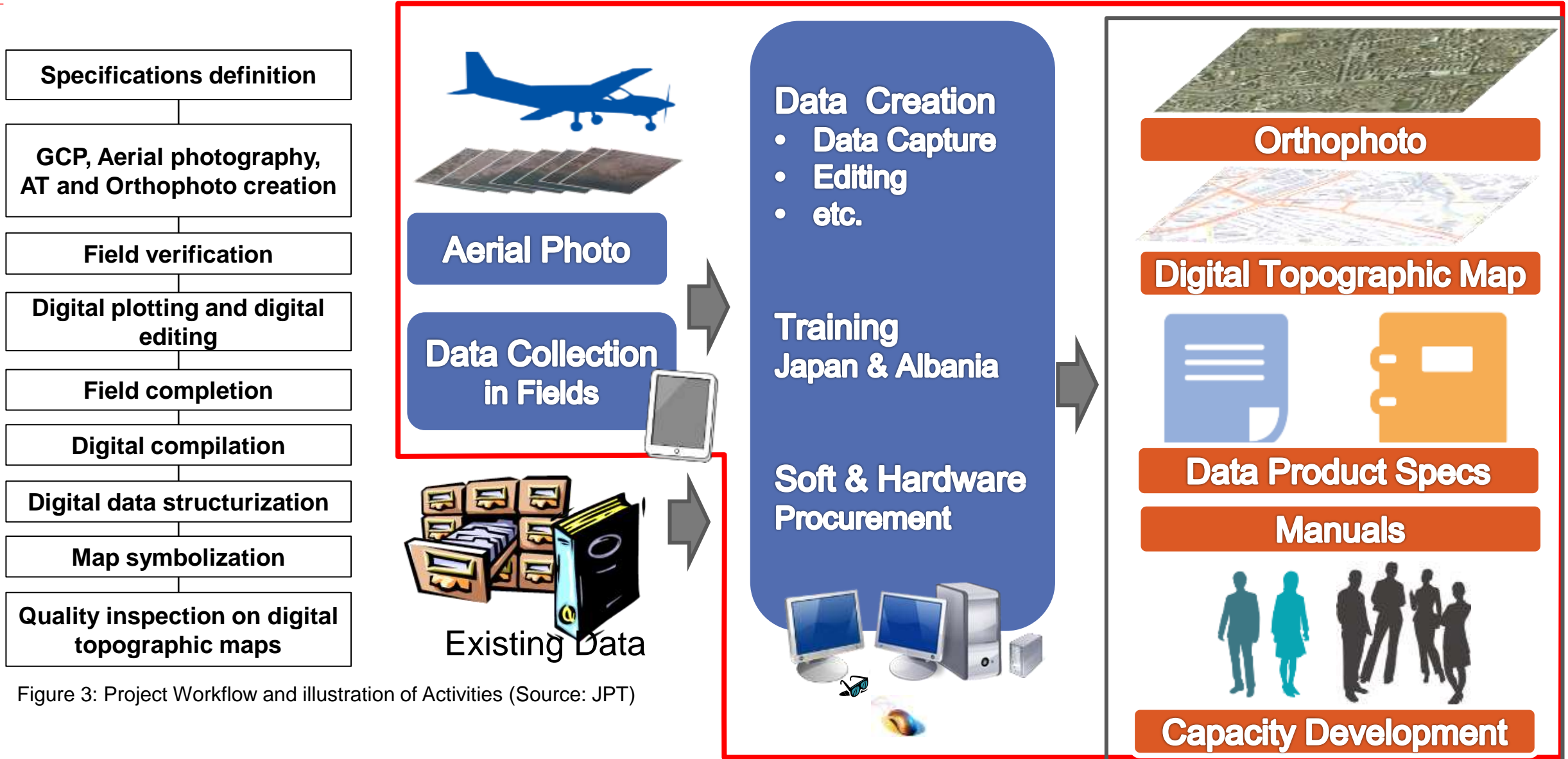


Figure 3: Project Workflow and illustration of Activities (Source: JPT)

# Conclusion and Acknowledgement

## Conclusion

- Large scale map will help to regulate ongoing unregulated urbanization and manage Tirana-Durres urban sprawl and an important input for the proper urban and infrastructure planning
- Improve the capacity of ASIG in terms of human resource, equipment and technology
- It is envisioned that ASIG could formulate and implement the large scale topographic mapping by themselves for remain territory of Albania

## Acknowledgement

- Data used in this paper is from the “Project on Geospatial Information for Sustainable Land Development in Tirana – Durres Area” implemented by ASIG, Albania, under ODA from the Government of Japan through JICA
- Team of consultants from PASCO CORPORATION and Kokusai Kogyo Co. Ltd., provided necessary consulting services to ASIG
- Hansa Luftbild, Germany conducted aerial photography and Lorenzo & Co SHPK, an Albanian company conducted all the field verification and field completion works under the supervision of JPT

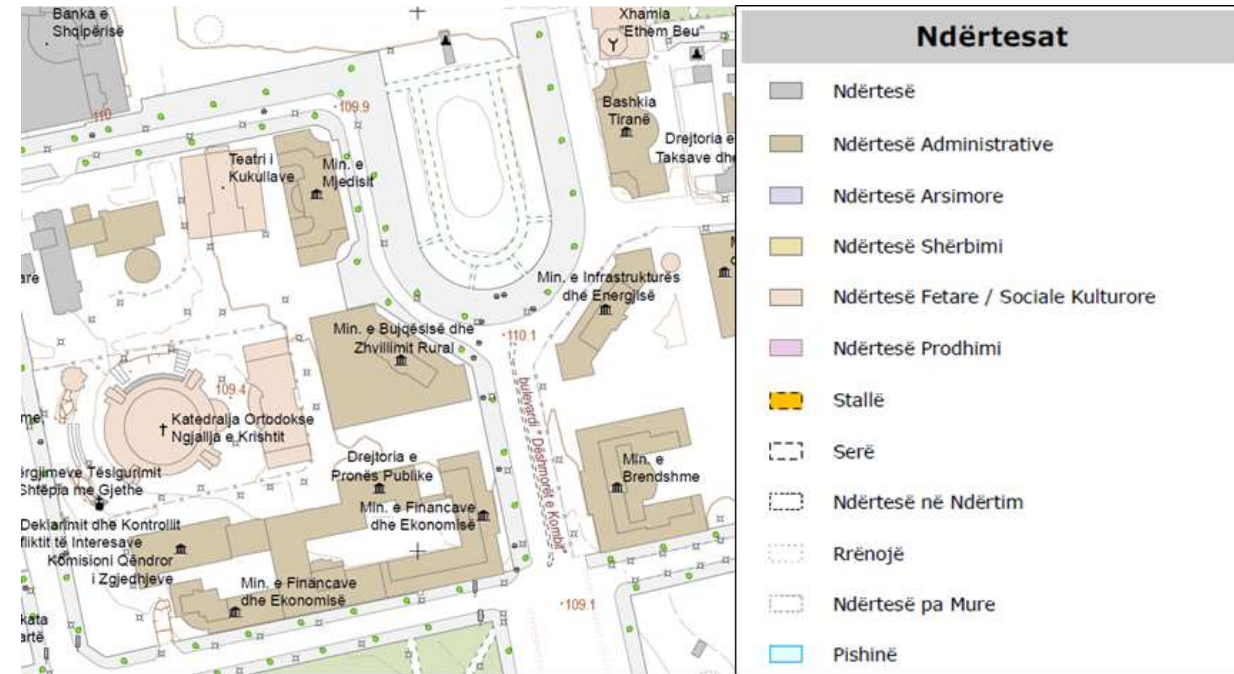


Figure 4 (a): An Example of Symbolized Map, (b): Legend of “Building” (Source: JPT)



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# Thank you for your attention

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