

Interactive comment on “Developing open geographic data model and analysis tools for disaster management: landslide case” by A. C. Aydinoglu and M. S. Bilgin

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Comment 2 (SC C2692) has a suggestion explained below;

1. the author should give more information about the usability of this approach for other types of hazards in accordance with the integrated disaster management approach suggested inside the paper for the use in public institutions of Turkey

- Section 2.1. Conceptual approach for disaster management was revised to explain the usability of this research for other disaster types. For example;

Page 4 / Line 16: ... such as landslide, earthquake, and fire.

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Page 4 / Line 18: ... For example, landslide risk analysis at mitigation phase, determining response units for fire at preparedness phase, determining earthquake effect area at response level, and restructuring works following flood at recovery phase are some examples of disaster management.

Page 4/ Line 27: ... Task is a part of the activity. Actors perform these tasks respectively for the response activity of any disaster type ...

- And in Section 2.4, current situation about disaster management and data management was examined in detail. This gives information about data management issues in public institutions.

Page 7/ Line 8: Disaster management projects of Turkey have been initiated after devastating Marmara earthquake in 1999. Turkey Disaster Information System (TABİS) project developed a database structure and GIS standards for disaster management. These standards were implemented for Istanbul in a project (Bilgi et al., 2008). Hazturk project based on Hazus developed an earthquake loss estimation for Turkey. Various projects more have been triggered, such as meteorological early warning system, seismic risk mitigation, emergency transportation network planning, and disaster information system projects especially focused on earthquake (Korkmaz, 2009). In 2009, the Prime Ministry of Turkey established Disaster and Emergency Management Presidency according to the law N.5902. It aims to coordinate all disaster events under a central administration structure and provincial administrations are responsible for managing disaster events (Gazette of Republic of Turkey, 2009). However, data management and coordination approach have not been determined yet to manage disaster types, actors, and disaster activities (Aydinoglu, et al., 2011; Erden 2012).

- If TUCBS data model is implemented as base data model by public institutions, data themes will be used as explained below;

Page 7/ Line 27: In this study, The ADYS data model titled as disaster management data model was designed with landslide case according to the data requirement in

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the activity analysis. As conceptual approach, The ADYS data model is compliant with TUCBS and Urban GIS (KBS) data models. TUCBS base data themes such as Address (AD.Adres), Land Cover (AO.Arazi Örtüsü), Building (BI.Bina), Administrative Unit (IB.Idari Birim), Hydrography (HI.Hidrografiya), Geodesy (JD.Jeodezik Altyapı), Orthophoto (OR.Ortofoto), Land Registry- Cadastre (TK.Tapu- Kadastro), Topography (TO.Topografiya), and Transportation (UL.Ulaşım) are used as base static data in disaster management activities (GDGIS, 2012-2). It is supposed that data interoperability will be possible at logical level because public institutions accepted TUCBS standards for the exchange of geographic data sets (Figure 2).

- And, as well as landslide, other data model and specifications were explained in summary, such as fire, flood.

Page 8 /Line 10: . . . The ADYS data model includes feature types defined in the disaster management activities for the disaster types like Earthquake (Deprem), Landslide (Heyelan), Flooding (Sel), Forest Fire / Fire (Orman/Kent yangın), Transportation Accident (Ulaşım Kazası), and disaster general (Afet Genel). This model includes disaster related feature types not defined in TUCBS and KBS data models. For example, beside other geo-data themes, landslide theme includes feature types; plantation area (Agaçlandırma Bölge), barrier area (Bariyer Uygulama Bölge), retaining walls (İstinat Duvarı), slope regulation region (Sev Düzenleme Bölge), drainage arrangement (Drenaj Düzenleme), landslide hazard (Heyelan Tehlike), and so on.

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