

## Increased Environmental Awareness of Flooding through Public Activation Using Geographic Information System (GIS) and Community Video

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This research was devoted to discover the roles of SIG outputs and community empowerment through community video to increase environmental awareness of disastrous flood. 60 research participants or subjects from 14 to 17 years old were representatives of 10 high schools in Sintang city and resided along Kapuas and Melawi riverbanks. The approach used in this research was action research – a measurement employing environmental awareness scales in two aspects, they were, attitudes and intentions during pre- and post- community video workshops on both control and experiment groups. The t-Test results during pre-test reflected the equivalence between control and experiment groups (attitudes  $.233 < .05$  and intentions  $.136 < .05$ ). The Anova results confirmed that intervention was significantly influential towards the increased environmental awareness on experiment group (attitudes  $F=37.543$ ,  $R\text{-square} .493$  and intentions  $F=31.589$ ,  $R\text{-square} .450$ ).

*Keywords:* environmental awareness, community video, SIG outputs, community empowerment

Penelitian ini bertujuan untuk mengetahui peranan output SIG dan pemberdayaan masyarakat melalui video komunitas dalam peningkatan kesadaran lingkungan terhadap bencana banjir. Partisipan penelitian sebanyak 60 subjek berumur 14-17 tahun merupakan perwakilan siswa dari 10 sekolah menengah atas di kota Sintang dan bertempat tinggal di pinggir sungai Kapuas dan Melawi. Pendekatan penelitian menggunakan pendekatan *action research*, pengukuran menggunakan skala kesadaran lingkungan dengan mengukur dua aspek yakni sikap dan keinginan/niat dan dilakukan sebelum dan sesudah workshop video komunitas pada kelompok kontrol dan kelompok eksperimen. Hasil t-Test saat pretest menunjukkan kesetaraan antara kelompok kontrol dan eksperimen (sikap  $.233 < .05$  dan keinginan  $.136 < .05$ ). Hasil Anova menunjukkan intervensi memiliki pengaruh yang signifikan terhadap peningkatan kesadaran lingkungan pada kelompok eksperimen (sikap  $F=37.543$ ,  $R\text{-square} .493$  dan keinginan  $F=31.589$ ,  $R\text{-square} .450$ ).

*Kata kunci:* kesadaran lingkungan, video komunitas, output SIG, pemberdayaan masyarakat.

Sintang region, based on its history, began with the settlement on the outskirts alongside the river (Fienieg, 2008). As the city is located at the confluence of two prominent rivers, namely, Kapuas and Melawi; and is filled with densely populated settlements located alongside the riverbanks, Sintang has been one of the cities vulnerable to catastrophic flooding (Koestoer et al., 2001; Fienieg, 2008; Jumadi, 2009). Its community has been accustomed to floods and considered it as normal. Therefore, most

people call Sintang as high tide city (Fienieg, 2008).

In recent years flood has been unavoidable and the one badly affected is the communities who reside by the riverbanks or beyond rather than those who reside in houseboats. The increasing intensity of floods is caused by the declining ability of the watershed, increasing population on residential riverbanks areas. In addition, the increased number of transferred lands in the upstream catchment area cause soiled areas to decrease and this causes all water to flow to the river and is unable to be absorbed by the soil. Further, siltation in the river due to waste, sand mining of gold also leads to the decreased capacity of the river (Maryono, 2005).

The increased density of settlement on the banks of

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