Wireless sensor networks for monitoring sediment transport

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Monitoring of the coastline and coastal processes, in particular movement of sediments, is vital to ensure that erosion response is appropriate given the dynamic nature of coastal systems. Monitoring should take place regularly over long periods of time and it is important to gather data relating to not just the visible beach, but the submerged portions of the littoral zone as well. This highlights two limitations in existing coastal monitoring techniques: 1. they require largely manual operation and 2. are limited to the visible beach. This results in an incomplete picture of what is happening in the coastal zone due to the inability to gather data beneath the sea surface. This research utilises Wireless Sensor Network (WSN) technologies to develop a novel method of monitoring sediment transport, that can overcome the limitations in current coastal monitoring techniques.