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Preliminary assessment of socio-economic benefits from CMA Meteorological Satellite Programmes

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China is one of the countries suffering heavily from meteorological disasters, and the occurrence of disaster is widely distributed and highly frequent. It is estimated that meteorological disasters count for 71% natural disasters; Meteorological disasters bring huge influence to china. Statistic shows that more than 384 million people and 45.187 million hectares of crops are affected by meteorological disasters on annual average from 1991 to 2012, and the direct economic losses counts for total of approx. 5,000 billion CNY (830 billion USD) in 1991-2012. Although the total amount of losses keeps huge and even larger, the losses to GDP ratio obviously trends to decrease, the annual average of losses to GDP ratio comes down from 3.3% GDP in 1990s to 1.0% in recent 12 years; It believed that the improvement of meteorological service contributes much for relative reduction of the losses of life and property.

Satellite data plays important role in improving meteorological service. The satellites are not only used in meteorology, but also extensively used in many fields such as oceanography hydrology, agriculture, forestry, transportation, environment protection, space weather, key construction projects, scientific research and so on. With rapid development of remote sensing satellite, evaluation of socio-economic benefits of satellite observing has become an interesting topic for global satellite operators in recent years. In this presentation, several case studies are presented to estimate meteorological service benefit, and a preliminary cost-benefit analysis on FengYun Meteorological Satellite Programmes is also given.