



TAIEX-PI
ASEAN Multi-Country Workshop
on Space Applications

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Cooperation opportunities

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ASI in the world



ASI ACTIVITIES OF POTENTIAL INTEREST FOR ASEAN COUNTRIES

- ❖ Earth observation
- ❖ Integrated applications
- ❖ Space transportation

EARTH OBSERVATION 1/2

❖ **COSMO-SKYMED**: a national programme funded by the It. Ministry of Research and the It. Ministry of Defence (MoD), managed by ASI in cooperation with MoD and developed by the Italian industry

4 SAR satellites constellation in X-band

Examples of possible applications:

- Risk management and emergency monitoring,
- Ocean and ice monitoring
- Security applications
- Technical cartography, urban planning

EARTH OBSERVATION 2/2

❖ **PRISMA:** Earth Observation system with innovative, electro-optical instrumentation that combine a hyperspectral sensor with a medium-resolution panchromatic camera. The hyperspectral sensor allows to determine the chemical-physical composition of the objects present on the scene

Examples of possible applications:

- ❖ environmental monitoring;
- ❖ resources management;
- ❖ crop classification;
- ❖ pollution control

INTEGRATED APPLICATIONS

Integrated applications combine the use of different types of satellites and technologies such as Telecommunication, Earth Observation and Navigation, using different systems to generate innovation and added value in services

Integrated applications can be used in several areas such as: telecommunication, energy, smart cities, transport



SPACE TRANSPORTATION

VEGA Programme conceived in Italy, became an official ESA programme in 1989; first launch February 2012

Funded at 65% by Italy, AVIO is the main contractor

Compatible with payload masses ranging from 300 kg to 2500 kg

Up to now 11/11 successful VEGA flights

ASEAN COUNTRIES MAIN AREAS OF ACTIVITY

Singapore

- ❖ Telecommunication
- ❖ Earth Observation
- ❖ Development of Micro-nano satellites
- ❖ Space technologies
- ❖ Education
- ❖ International cooperation

ASEAN COUNTRIES MAIN AREAS OF ACTIVITY

Other countries

- ❖ Indonesia: mini-satellite development, earth observation
- ❖ Malaysia: satellite development (e.g. micro), earth observation
- ❖ Thailand: earth observation, small satellites development, TLC
- ❖ Vietnam: earth observation, space science, TLC



AREAS OF POTENTIAL COLLABORATION AND RELATED ITALIAN COMPANIES

- ❖ **Earth observation:** e.g. E-geos, ACS, TRE, Planetek Italia, Innova, GAP, Geo-K, Next, Kell
- ❖ **Integrated applications:** e.g. Telespazio, Flyby, Tyvak, Nais, Space Engineering, Intecs, Next
- ❖ **Enabling technologies:** e.g. TASI, Leonardo, AVIO, Sitael, Aerosekur, Kayser Italia, OHB Italia, Vitrociset, MEC, D-Orbit, IMT, Techno System Developments

Beyond the above mentioned technical areas, collaborations could be envisaged in the **Technology Transfer** area, **Education** area and **H2020 EU research programme**

CONCLUSIONS

ASI is ready to support potential future collaborations with space and non space entities of the ASEAN countries, for example, through:

- ❖ organization of thematic workshops
- ❖ organization of b2b meetings (both in Italy or in the ASEAN interested countries)
- ❖ visits to Italian companies/Universities/research centers
- ❖ Education activities with Italian experts in ASEAN countries Universities/Research institutes or other entities
- ❖ support for innovation and technology transfer project (e.g. incubators)