

ALC-2011

FINAL RECOMMENDATION

1. Africa should follow India's example of helping the poor people in villages address their social-economic needs using space technology.
2. Encourages stronger regional cooperation among institutions involved in nano- and small-satellite activities in Africa.
3. Encourages African countries to actively support capacity building activities related to space technology development, through:
 - providing funding support through appropriate national programmes;
 - establishing, in compliance with international law and internationally agreed upon standards of operation, a legal and regulatory framework that is conducive to such activities;
 - encouraging space technology hands-on educational projects, such as CanSat or class-room satellites (Edu-Sat), from secondary education level.
4. Encourages that capacity building programs should be designed to allow an incremental learning process for both individuals and organizations. Such programs should also build on learner initiative
5. Encourages that technology management should be prioritized as a skill to developed among African individuals and organizations.
6. Encourages training experiences that emphasize hands-on training. Such training allows participants to learn many areas such as project management skills, team work, systems engineering as well as technical knowledge and skill.
7. Encourages efforts to utilize the existing educational organizations such as secondary and tertiary schools for capacity building in basic space technology.
8. Encourages the formation of university associations similar to UNISEC would be useful to enhance university capability to promote hands on technology training.
9. There is need to ensure that data is available for African users in a timely manner
10. For this to be achieved there is need to improve the connectivity within countries
11. Set up data centers for the space data which is already available
12. Establish a operating system which can disseminate data effectively

13. The countries should build capacities in space science
14. Improve on space data interpretation and analysis
15. There is also need to have inter-governmental agreements on space matters
16. There is need to have an inventory of space technologies in Africa
17. Have SDI for Africa in place which will enable users to know the data available in Africa and the standardization of data for ease of sharing
18. Need to link data providers with the users
19. Data sharing policy need to be developed and implemented
20. There is need to have a robust public awareness campaign among user on data available in Africa to increase the usage of Africa space assets among Africans
21. A committee should be put in place to create awareness
22. There is need for development of a clear regional policy on space science
23. Members state to initially develop national vision which will the inform a African shared vision
24. Improve on communication
25. There is need to involve many African countries in the Vision
26. There is need to identify someone to package and communicate the information
27. The is need for countries with developed astronomical programmes to partner with those that are yet to start to share knowledge
28. Need for capacity building through workshops, seminars and other training programmes
29. Build infrastructure in partner countries
30. Develop a link for national priorities to regional priorities
31. Space community of users and development communities should to work together in developing a shared vision
32. Five areas where in which space has potential to contribute to Africa development:
 - Enabling of economic activities
 - Building domestic technological capability
 - Development of technology applications and spinoff
 - Building of scientific knowledge

- Applying satellite services

33. We need support from governments that understand tangible benefits.
34. There is a need to align space technology with national concerns and issues. This refers to previous discussion about data availability. There is still a need to work on how to apply satellites to key social areas such as poverty reduction, urban planning, etc. Before SPOT was launched, there were prior campaigns for two years to show how the data could be used with simulated data. Data do not automatically provide knowledge; decision makers need to be provided knowledge.
35. It is, however, better for us to also focus on satellite engineering since it has been easier for politicians to understand those presentations.
36. Participants asserted that Small satellites can be politically helpful because they can be quickly built, so that politicians can see results during their term of office.
37. It is hard to sustain funding for projects due to politics. A participant recalled the occasion when the French team showed SPOT simulated data. He is not sure, however, if African satellite teams can also work to increase awareness. We need to inform the public of what the data can do before the satellite is launched and explain the data policy and applications.
38. Need to seek more international partnerships and leverage in on-going space programmes – NASSP, Africa Array, SCINDA-GPS, MAGDAS as vehicles for training, research and capacity building in Space Science and Technology;
39. Take inventory of existing capacity in space science and technology in Africa and take advantage of initiatives such as AU, PAUSTI;
40. Consider borrowing from the experiences of space fairing and space capable nations through collaborations– in order to avoid past mistakes;
41. Identification of individual countries' needs and allocation of adequate resources towards development of space science;
42. Involving key stake holders and users of space products in PPP initiatives and development of dual purpose space programmes in mature sectors such as communication and navigation;
43. Seek a unified approach to solve common problems in order to leverage on the limited human and infrastructural resources while linking economic needs to specific space programmes;
44. Strengthen the capacity of local teaching and research institutions;
45. Develop curricula for basic space sciences, preferably at the primary and secondary school level – to initiate interest in space science and technology;
46. Take advantage of opportunity offered by developing and managing specific space programmes/systems to harness high-tech locally available capacity;

47. There is need to implement National Policies, Laws and Regulations taking into account the differing legal traditions.
48. Accede to the United Nations Treaties on Space law
49. Contributes to State practice
50. Main recommendation arising was the need for new legal instruments on space debris, set principles, conventions and protocol
51. There is need for Policy and strategy, a collaborative approach and ALC provides a good avenue for collaboration.
52. There is need for partnership and teamwork and the ALC is a unique forum.
53. A Working Group (WG) comprising members from national space agencies, industry experts and academia drawn from African countries with active space programs, namely; Algeria, Egypt, Ghana, Kenya, Nigeria and South Africa be immediately constituted. The WG's timeframe be clearly defined.
54. The WG will immediately undertake the following immediate functions: - A study will be immediately conducted on how a continental space organization will be formed (including its history - origin, legal, institutional, political and funding frameworks.
 - Deriving a shared Vision and Mission for SS&T for Africa;
 - Take stock of the current status in Africa in regard to SS&T;
 - Develop short, medium and long term guidelines for SS&T in Africa.
55. The ALC Steering Committee Member States (Algeria, Egypt, Kenya, Nigeria & South Africa) urges the Government of Kenya in its capacity as host of ALC2011 to convey in the strongest terms possible, the importance of giving recognition to the budding Space Science and Technology (SS&T) competencies and capabilities in Africa exemplified by the ALC, and make use of that body in all its space-related deliberations and decisions.