

# Future Strategic Plan

May, 2016

Science Council of Asia

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## 1. Role of SCA in Asia

### 1.1 Overview of SCA

Science Council of Asia (SCA) is a non-profit scientific organisation, founded in 2000 by members of the Asian Conference on Scientific Cooperation (ACSC) that was hosted by Science Council of Japan (SCJ) from 1993-2000. The Conference consisted of 10 member countries as follows: China, India, Indonesia, Japan, the Republic of Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam (see Appendix 1). Its purpose is to facilitate scientific cooperation in the region toward progress in science and in sustainable development of the region (see Appendix 2). Currently (as of May 2016), the membership of the Council consists of 31 scientific organisations from 18 countries/region, namely, Bangladesh, Cambodia, China, China: Taipei, India, Indonesia, Japan, the Republic of Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, and Vietnam. SCJ provides the Secretariat for SCA.

SCA's main activity is to organise an annual international symposium, with presentations of research papers and workshops, especially for bilateral and multilateral research collaborations by researchers from the region. It convenes a General Assembly (GA) bi-annually and hold an annual Management Board (MB) meeting in member countries. (In what follows, these events will be referred as "Conference" altogether.) Host countries for the Conferences are rotated among member countries. The first Conference was held in Thailand in 2001, and the latest Conference took place in Siem Reap, Cambodia in 2015. In order to expedite research collaboration and networking among scientists in the region, the conduct of joint projects was seen as a means of achieving such regional collaboration. The first such joint project was proposed and approved at the 1st Conference in 2001. From 2005 onward, following new guidelines approved at the 4th Conference in 2004, a total of 17 joint projects have been endorsed by SCA.

### 1.2 Outline of the past reforms

SCA has constantly reviewed its management and activities in order to maximise its scientific and social influence. In 2007, SCA adopted the "Communique of the 7th

Conference,” and shared the following views pursuing its further contribution to policy advice and closer member cooperation.

- Reaffirm its objective, improve members’ functions, and prepare reports on Asia’s common issues to be delivered to policymakers,
- Draw a three-year strategic plan to be approved at the 8th Conference,
- Start new joint projects concerning some urgent issues for Asian members,
- Build close collaboration with the ICSU Regional Office for Asia and the Pacific (ICSU-ROAP),
- Continue deliberation on more solid fiscal framework.

At the 8th Conference, the first strategic plan for 2008-2011 was adopted, which recommended the following actions:

- Prepare for the upcoming Conferences well in advance, and issue joint statements,
- Promote more joint research projects,
- Deliver the outcome of the Conferences to policymakers with recommendations,
- Strengthen the relationship with ICSU-ROAP, among others.

At the 9th Conference in 2009, “New Framework Committee” was set up, and at the 10th Conference, a report by the Committee was endorsed, which has no target year. Subsequently, at 11th Conference in 2011, new activity guidelines was approved, and the statutes and by-laws were amended accordingly.

### 1.3 Necessity of new strategy

Since the New Framework Committee delivered the report in 2011, the economic and social circumstances around SCA have been drastically changed. First, we need to recognise that Asia’s importance in the world has been increased, so does responsibility. While the world economy suffered the financial crisis since 2008, the economic growth of the region has been much higher than that of the world economy. Consequently, the share of Asia’s economy in the world economy has increased a lot, namely from three tenths in 2010 to four tenths in 2015. The region’s influence on the world economy is larger than before. Second, not only quantity but also quality of the economy now matters. Against the backdrop of the stronger economic performance, the income level of the region has also been increased. For example, poverty rates have drastically declined in many countries. This has caused changes in the social expectation toward science in the region. Science is now expected to contribute to higher well-being for urban residents or business innovation in industries. Third, rapid economic development of region’s countries has entailed new challenges. For example, although high, the economic growth is now lower than that of the past, and therefore in order to avert the so-called ‘middle-income trap,’ stimulating innovation is crucial for the region’s economies. Furthermore, how to achieve

both economic and environmental prosperities simultaneously is now of the highest priority in any countries in the region. Fourth, cross-border issues are more prevalent and need to be considered seriously. As the globalisation advances, the economic integration of the region has also made great strides, and in 2015, the economic unification among ASEAN countries was put forward. Accordingly, the economic and social activities in the region are now easily crossing the borders. This means that, even in the field of science, cooperation beyond national boundaries is inevitable. Finally, we should take into account recent dynamic developments in science and policymaking communities on the globe. In the global sphere, also in 2015, the UN adopted the SDGs as successors to the MDGs, a new phase of global endeavour toward sustainable development. Accordingly, Asia's new initiative to this end, which would involve various stakeholders, are increasingly required. Concerning the global actions for tackling climate change, the largest number of countries participated in the Paris agreement, which was endorsed at COP21 in 2015, together with some populous countries from Asia, such as China and India.

These global trends cannot be ignored, when considering how scientific cooperation and development in the region can be adapted to the current realities and expedited. Providing society with useful science advice that takes into account emerging trends is one of the responsibilities of SCA. As a regional organisation, it will be able to serve as a platform for collaborative work/research to collectively address the needs of the region, especially in topics that cannot be solved by member countries individually.

In addition, as Asia's importance in the world increases, joining forces among scientific organisations in the region is now encouraged to show Asia's responsibility to the whole world. In this context, Committee on Future Strategy of Science Council of Asia was established at the 15th Conference, and commissioned to deliver inputs to a mid- and long-term strategy for SCA's future at the 16th Conference.

#### 1.4 SCA's past contribution to the region

Since the period of its forerunner, the ACSC, SCA has contributed to scientific development at national and regional levels, as well as science endeavours against various problems for almost a quarter century through forming networks of the scientific organisations in the region. In 2000, the ACSC, which was a gathering of some prominent scientists in Asia, was progressively reformed into a non-profit international scientific organisation. This was such a large transformation that made its management and activity more stable, and strengthened its contribution to society. Furthermore, the recent increase of member countries, has brought about a higher multiplier effect of

networking. (cf. networking opportunities in a group increase faster than the increase of the number of its participants.) SCA, which started as an institution of 16 scientific organisations from 10 countries (see Appendix 1), has now become a large umbrella that covers most of the region, and in this sense, it is an appropriate platform for member country organisations to make use of it as a tool for regional cooperation.

One of distinctive features of SCA is the rotation of the host country of its Annual Conferences. Through an experience of organising a Conference, a host country could obtain the latest information on scientific development in the region, create and strengthen networks with other organisations/institutions, and improve its competence in science advice through deep involvement with government policymakers. Another unique feature of SCA is that a host country decides the Annual Conference theme. Because of this, the host country should show the relevance of their theme to other institutions and the public, explaining that prospective discussions at the Conference would be applicable not only to their country but also to the region as a whole. Science gives us a fundamental knowledge, but in practice there is no one-size-fits-all science solution. In this regard, at SCA, while paying great attention to a particular country or local area, it has created opportunities for Asia-wide science discussions on how we can address Asia-wide problems.

Cooperation with other international organisations has been conducive to this development, as they have informed us of the latest trends in science community. For example, in 2014, the Annual Conference in Malaysia picked out the Future Earth initiative as one of the topics through the collaboration with ICSU-ROAP, although the initiative was still at the preliminary stage. Accordingly, discussions at SCA could be considered to be highly up-to-date. Partly as a result of these contributions, SCA has been a member for the International Social Science Council (ISSC) since 2013, and has become Regional Scientific Associate of the International Council for Science (ICSU) in 2016. SCA is now perceived as an Asia's representative in international scientific circles.

### 1.5 Way forward

As aforementioned, SCA has contributed to enhancing science advice capacity of the member organisations and to strengthening the implementation of Asia-wide scientific undertakings in various forms mainly through organising Annual Conferences. Since 2013, SCA has started to issue declarations/joint statements at Annual Conferences in order to return science benefit into the society. It is well recognised that this kind of SCA's role has become more important to society. As the number of the member countries and organisations has increased and the geographical coverage now almost coincides

with the whole of Asia, it would be more beneficial if SCA would address Asia-wide issues more intensely than before. Furthermore, the approach that stresses the autonomy of member organisations is also suitable for encouraging science application in the local contexts. It could also be appreciated that SCA continued to catch up with the latest international science and social trends, while it pays attention to individual local areas and issues. Having considered the emergence of prosperous Asia and the dynamism in the global trends, it will be more important to pursue Asia-wide academic cooperation.

## 2. Development in organisational reforms

### 2.1 Management organisation

Some reforms in the managerial framework were conducted in accordance with the New Framework Report issued in 2011. First, since 2011 GA meetings have been held on rotating basis among member countries biennially. (Before 2011, GA meetings had been held once a year. MB meetings continue to take place annually.) In particular, a person who serves as President, works as an Official for four years in total, namely, as President-Elect, President, and Immediate-Past President. (Before 2014, it was for six years.) This is believed to be effective for the previous host countries to inherit the know-hows of organising SCA Conferences to their successors.

However, the recommendation that MB meetings be held in Japan in years when GA meetings are not held, has not been implemented. This is because it would increase financial burdens of members. According to the current statutes, the academy to which Vice-President belongs shall hold a MB meeting together with an international symposium. It would not bring about a great merit, if MB meetings would be held in Japan, apart from, or in addition to the current practice, so that it would be reasonable to keep the current framework for the time being.

### 2.2 Budget

One of the characteristics of SCA is that it does not collect membership fees. This might constrain some activities of SCA. For instance, in case that activities other than those which have been engaged were planned (for example, a workshop in another country in addition to a regular Annual Conference), additional corresponding budget should have been prepared. Therefore, if a certain activity were to be expanded, further consideration would be given on whether or not these expenses could be covered by collected fees or some other sources of funds.

However, there may be some drawbacks in the membership due system, as additional fees would be a burden on each member. In contrast, the current system lends SCA a

unique feature as a science group which share common objectives not through a fee contract, in a sense that any scientific organisations who advocate the founding purpose are welcomed to become members without financial contributions. Accordingly, financial burden on members are much smaller than other international academic organisations (expenses are needed only for participating in GA and MB meetings except the case of hosting an Annual Conference), and from the financial point of view, a hurdle for participating in the SCA activities is considered to be relatively low. (To put it the other way around, enriching the activities could directly increase its attractiveness.) Moreover, since its reform in 2011, when a member country take a role of hosting a Conference, the host country must raise funds by itself, which is equally applied to all host countries, while SCJ shares some part of expenses as the Secretariat of SCA. Considering these points, the GA discussed the pros/cons of the fee system in 2014, and concluded that moving to the fee system would not be suitable. SCA should maintain this unique system.

With regard to Joint Project Workshop (JPWS), which is part of Conference, it has succeeded in obtaining support from various organisations, such as Japan International Cooperation Agency (JICA), in line with the recommendation in the 2011 Report. Such efforts should be continued in the future. However, in the longer run, it may be necessary to discuss how to strengthen financial resources for international activity, for example, in order for an SCA representative to participate in meeting held by other international scientific organisations. Currently, no budget is prepared for such a purpose, so that participants should find budget by themselves depending on the importance of the event concerned.

### 2.3 Way forward

As mentioned, since 2012, the reform recommended in the 2011 Report has been implemented. In particular, following the report, the statutes and by-laws were revised at the 2014 Conference: the GA meetings have been convened biennially, and the costs of organising Conferences are now mainly covered by a host country. Since then, Cambodia, Sri Lanka, and Bangladesh, which recently joined SCA, hosted or will host Conferences. From now forward, the first priority is to put forward the on-going reforms. While implementing these important reforms, the managerial and budgetary systems should be reviewed sometime in the future, if necessary, taking into account new activities that SCA would pursue.

## 3. Membership issues: country/region, institutions, and subjects

### 3.1 Characteristics of SCA

As described above, member countries of SCA cover most of Asia, which makes SCA an



appropriate place for discussing regional issues. Moreover, as membership dues are not required, it would be easy for science organisations from developing countries in Asia to join, and in some sense, financial burden among members can be considered to be impartial. In addition to this, SCA has two particular characteristics. First, it covers all the academic disciplines, including social sciences and humanities, so that it is easy to have inter-disciplinary discussions aiming at science-based solutions. Second, more than one organisation from one country can join SCA. Accordingly, from many countries, scientific organisations, funding agencies, and related government authorities can be members of SCA. From countries, where national institutions exist in natural and social sciences, both sectors can be members of SCA. Thus, mobilising all the academies in a nation to host a Conference could be an easy option, and it is not difficult to have Conferences of inter-disciplinary themes, which is a great advantage of SCA.

### 3.2 Comparison with other organisations

In Asia and surrounding areas, there are four international scientific organisations, namely, the Pacific Science Association (PSA), Association of Asian Social Science Research Councils (AASSREC), ICSU-ROAP, and the Association of Academies and Societies of Sciences in Asia (AASSA). In what follows, characteristics of SCA are analysed in comparison with the four organisations.

The PSA is an international scientific organisation, which has a long history (It was established in 1920.). It aims at sustainable development of the Asia-Pacific region, through provision of science information for society and policymakers on globally important issues, such as biodiversity, climate change, and infectious diseases. Its member countries/regions cover mainly the Asia-Pacific region, including Pacific island states. At present, 30 organisations belong to the PSA, and France is a member country from outside of the Asia-Pacific region. Members have to pay membership dues. The membership of the PSA is very much unique: more than one organisation from a country can be members, and a local scientific organisation or even a university in a country are treated as a member with equal status, latter of which is different from SCA. Furthermore, collaborations with non-member countries are highly valued. For examples, Malaysia and ICSU-ROAP participate in the PSA as “Non-Adhering Member.” The PSA has some similarity to SCA, as they both aim at sustainable development of the region, but their spatial coverages are different, and SCA’s academic fields are wider than that of the PSA. The PSA is a Scientific Associate of ICSU as is SCA.

AASSREC was initiated by UNESCO’s activity which sought for developing social science in Asia and established as a regional scientific organisation in 1973. It covers

social science fields, and pursues promotion of social science development in the Asian Pacific regions and strengthening of international collaboration. Member countries are from Oceania, the Middle East, and Asia. Currently, they have 15 Members and Associate Members altogether, and membership fees are collected. Compared with SCA, AASSREC focuses on research, education, and outreach of social science. ASSREC is Member of ISSC, which is an international organisation in social science fields, while SCA is Associate Member of the ISSC.

ICSU-ROAP was established in 2006 as one of three Regional Offices for ICSU. ICSU's Regional Offices pursue science application in regional context and help promote science in developing countries, involving scientists in each region into ICSU activities. It covers most of sciences as ICSU does, although they cover less in social sciences. The current member consists of 24 National Members of ICSU from Asia and the Pacific. As it is financially supported by ICSU, no membership fees are collected. Compared with SCA, ICSU-ROAP seeks for science application in Asia in line with ICSU's priority (They are "International Research Collaboration," "Science for Policy," and "Universality of Science.") by mobilising international scientific resources, which it can utilise through the support of ICSU. SCA and ICSU-ROAP have collaborated each other since its establishment.

The AASSA was founded in 2012, as a result of the merger between the AASA (Associations of Academies of Sciences in Asia) and the FASAS (Federation of Asian Scientific Academies of Societies). Its fields are mainly related to science, engineering, and life sciences, but it deals with wide varieties of issues, such as gender equality. Its members are from 30 countries/regions, including Oceania, the Middle East, and Central Asia. More than one organisation from a country can join the AASSA, and the AASSA collect membership dues. In addition to "Members," there are some other statuses, namely Associate Member and Observer. Moreover, the AASSA is one of four Regional Networks of the InterAcademy Partnership (IAP), which subsidises the AASSA. The AASSA has frequently organised IAP's regional workshops, which a member country presides over. The AASSA is more similar to SCA compared with the other three organisations. The regional coverage of the AASSA is wider than that of SCA, while the scope of academic fields for SCA is more comprehensive. The AASSA is also an Associate member of ICSU.

The characteristics of the four international academic organisations related to Asia have been compared with those of SCA, and it is found that each organisation has its own mandates stemming from its founding purpose, scope of academic fields, and regional

coverage, among others. Therefore, a scientific organisation of a country will determine which of the four organisations would be suitable for its participation according to its expertise and interest with the aim of deepening and widening its international activities. Consequently, it is considered that the five organisations do not compete with each other, and rather, they complement each other. Compared with the other four, a unique feature of SCA is that, in addition to the no membership fee system, it covers all academic fields (for example, SCA is the only organisation that has a membership both for ICSU and for the ISSC; Note that integration of these two organisations is now under discussion). Accordingly, SCA could have an advantage of providing a more useful scientific platform for inter-disciplinary undertakings than the other organisations. In this regard, as SCA currently has only two/three categories of membership status (i.e., National and ordinary Members, which merely have rather administrative meanings; other non-member participants are called Observers), while other organisations have more, if SCA would like to catalyse more interactions among various academic organisations/institutions of different fields, it could be considered to create a new category of membership, such as “specialised research associate,” for specialised scientific organisations/institutions in the future. It should be noted that SCA have invited the four organisations above to the Annual Conferences as observers.

### 3.3 Relationship with non-member/institutions

Although by now SCA covers most of Asia in terms of its member countries, not all of the national institutions or all the academic fields are embraced. For instance, as for country/region, Laos, East Timor, and Brunei have not yet become SCA members. However, SCA has always been open to any nations/regions or academies in Asia in order for scientists in the region to cooperate to solve regional problems. In the past, Laos and East Timor were invited to the SCA Conferences for their consideration of becoming an SCA member. SCA should continue to provide non-members/institutions with useful science information more intensely than before, and to contribute to networking of Asian scientists, in order to help tackle Asia’s common problems.

### 3.4 Way forward

As mentioned, SCA should be a good place for inter-disciplinary discussion as it covers all fields of academic research. From now forward, the inter-disciplinary academic activities will be more important than before. On the other hand, it would also be essential to provide specialised members with useful platforms for their activities. In this regard, for example, it could be considered that a workshop be organised for a specific subject or interactions among multiple subjects, and one of the prospective roles of SCA would be to expedite networking of specialised scientific institutions, including

public ones, in Asia. Spatial coverage or membership of countries/regions has been discussed case by case (i.e., merit-based), and as SCA has already covered most of Asia, consideration should be given from the view point of how it could strengthen science cooperation in the region. That is, taking into account manageable burden for the current framework and commonality of concerns among members on various regional issues, the SCA members could deepen their common understandings on the regional coverage of SCA. Furthermore, it is encouraged that SCA be used as a bridge institution for strengthening bilateral relationship among the members. Thus far, as a number of bilateral relationships have been enhanced, for instance, resulting in some Memorandum of Understandings (MoUs), through SCA as a meeting point, it would be helpful to upgrade JPWS, among others, picking out some informative bilateral research projects as it was originally envisaged (see below).

#### 4. Enhancing academic activity

##### 4.1 Issues around Annual Conference and way forward

The SCA Conferences have earned a high reputation in- and out-side of host countries in terms of the level of academic discussions and the relevance of the topics that they have dealt with. However, there is some room for improvement especially on preparation, such as having a longer pre-arrangement period of calling for papers. In the past, approximately 70-100 papers have been applied to one Conference, which indicates the high academic relevance of the SCA Conferences, while the process of preparing final program for the Conference tends to take place sometime very close to the Conference itself, which may not be convenient to a number of participants. In this regard, it is useful to decide the theme and to start calling for papers well in advance. This also contributes to push up the number of papers applied.

For those academies who organise GA and MB meetings, they have a 2-year internship period as a President-elect and President before they actually organised the Conference by themselves, which allows them to watch closely how other members organise SCA Conferences. On the other hand, for those members who organise just an MB meeting, they have to prepare for their Conference, which will be held in their county just one year later, immediately after they become Vice President. As they cannot directly learn from other countries' experiences, assistance from the Secretariat is inevitable in such a case. Perhaps it could be considered to create a new position of a Vice President-elect in order to offer a longer learning period. Furthermore, an excursion is also an important element of the Conference. In 2015, the theme of the Conference in Cambodia was on "Science and Technology for Culture," namely the usage of science and technology in preserving heritages, among others, which well comprehended the excursion to Angkor

Wat as part of the Conference. It is better to plan an excursion, which has some linkage with the Conference theme. The excursion for the 16th Conference in Sri Lanka includes one of the topics of the Conference, namely application of nano-technology.

The SCA declarations, which are usually announced at the end of the Conferences, have also established a high reputation, and thus this exercise should be continued. The issue to be considered relating the declarations is how the science advice could be realised in real policymaking process. For instance, it is necessary to invite government policymakers and international public organisations more than ever, in order to deliver our science advice directly. This would be also conducive to successful fundraising in the host countries. JPWS has been an introductory session of bilateral research projects between host country and Japan, such as Science and Technology Research Partnership for Sustainable Development (SATREPS). Although the evaluation of this workshop has been sufficiently high, making JPWS more informative would be desirable. Until 2014, JPWS had been a closed session, but in 2015, it was a part of an international symposium and open to all the participants, which resulted in a large number of audience. It is better to have a JPWS as an open session. This would also be helpful in seeking for assistance of relating institutions, such as funding agencies of the projects concerned, as it could be used for an opportunity to disseminate their project outcome. It could be worth considering to introduce bilateral research projects between the host and countries other than Japan, which was the original idea of JPWS. Some other devices for academic activity will be discussed later.

#### 4.2 Issues around publication and way forward

As explained, the SCA Conferences have gained some useful results. However, there is still some room for improvement in dissemination of its academic results, which aims at higher visibility and contribution to society. A remarkably large step has been taken at the 16th Conference in Sri Lanka, as its proceedings book obtains an ISBN code. This allows participants to refer to/cite their papers at the Conference as their academic achievements, which makes the Conference more attractive. This practice should be continued. Furthermore, it should be considered in the near future that some papers presented at Conferences could be transferred to international journals, which would be increasingly encouraging for applicants. To this end, an approach and negotiation with publishers has to be made well ahead of the Conferences, and a system in which SCA could recommend some seminal papers from its Conferences to the publishers needs to be established.

Although most of the information and activities of SCA are available on the SCA webpage

located at SCJ (see <http://www.scj.go.jp/en/sca/index.html>), the proceedings of the past Conferences are not archived because of the insufficient capacity of the Secretariat server, among others. As the host countries are rotated, the detailed information on the past Conferences is in host countries' servers or webpages. The storage duration and the level of details depend on ICT environment, capacity, or guidelines of each host organisation. Accordingly, information of the past Conferences has not been archived sufficiently enough. As ISBN codes are obtained, some part of the problems will be solved, but how to improve the archive quality of Conference information still matters.

SCA annually distributes a brochure, which contains information on the past Annual Conferences, officials, member organisations/institutions, among others. The brochure has been renewed annually by the Secretariat. Thus far, SCA has not issued any newsletters, however it would be better to consider appropriate periodical tools for the visibility or outreach within the limit of its budgetary resources.

#### 4.3 Issues around international activities and way forward

As SCA is now members of the ISSC and ICSU, it is very important to make best use of these memberships. SCA has been involved in their international activities in such a way that Future Earth was picked out as a Conference topic, which both the bodies take the initiative. Strengthening such activities further in the future would be a good strategy. In particular, for example, SCA may offer places for regional activities of ICSU's Scientific Unions. It is said that some Scientific Unions have plans to expand their academic activities in rapidly developing Asia, such as having a regional workshops, and so on. It is highly useful to collaborate with these Unions and discuss relevant issues at Conferences or any other events. As SCA embraces a number of academies in social sciences and humanities, it would also be a useful platform for the ISSC. The ISSC and ICSU-ROAP kindly helped distribute the circular for the 2016 Conference, uploading them on their webpages, which was very helpful. Such collaboration should be continued.

#### 4.4 Cooperation with international organisations

As depicted above, it is impossible solely for academia to tackle the problems that our society is currently faced with, and cooperating with non-academic stakeholders is inevitable. In particular, strengthening cooperation with some international organisations, including those for policymakers, is promising. SCA has been undertaking cooperation with some international organisations as below, however the effort is not yet sufficient. Further cooperation with international organisations should be pursued in the foreseeable future. In the past, at the 13th Conference in Thailand, Dr. Bindu N. Lohani, Vice-Governor of the Asian Development Bank (ADB) was invited to give a

keynote speech entitled “Challenge for Development of Asia: Role of Science and Knowledge,” which was highly welcomed by the audience. However, the collaboration with the ADB has not been deepened further. Other than ADB, only Asia Pacific Economic Cooperation (APEC) was invited to the 14th and 15th Conferences as an observer.

From now forward, SCA should further strengthen the collaboration with other international organisations and pursue the complementarity with the other regional academic organisations. In the region, a lot of dynamic movements can be seen: the Organisation for Economic Co-operation and Development (OECD), a policy think-tank formed by some developed countries around the world, has rolled out its activities in the Science & Technology fields; and recently ASEAN+3 Macroeconomic Research Office (AMRO), which is located in Singapore, has been transformed into an international organisation for economic policymaking and research. SCA should make best efforts to establish strong cooperative relationships with these organisations, among others. In particular, these organisations should be invited to Conferences as observers. Furthermore, as science advice is now an essential activities of science community, there are some efforts in bridging science and policymaking at global level. One of the recent development was the launch of the International Network for Government Science Advice (INGSA) in 2014, which is led by ICSU, among other. This is a forum for scientists and policymakers to share the knowledge for science-based policymaking. Participation in this forum would improve SCA’s capacity and competence in science advice.

## 5. SCA’s advantages and future strategic fields

In what follows, some strategic fields, in which further undertakings should be put forward, will be discussed and summarised, although part of them have hitherto been mentioned.

### 5.1 Enhancing interactions among member academies

The advantages of SCA is that its member countries cover most of Asia and it also covers wider disciplines of academic fields, which is useful to enhance scientific interactions among member organisations through various channels. Nurturing young scientists is now considered as an important issue by a number of international scientific organisations, such as IAP and the World Science Forum (WSF), and is a common issue also in Asia. Against this backdrop, establishing a young academy has been conducted in each country around the world in collaboration with the Global Young Academy (GYA) and some other international scientific organisations. In this regard, SCA, taking the role of a regional platform, could organise events relating young academies in

cooperation with some international bodies, such as the GYA in order to expedite further interactions among young scientists from various disciplines in Asia. It is highly welcomed that a session for young scientists is planned for the first time at the 2016 Conference in Colombo, Sri Lanka. Furthermore, as aforementioned, since scientific cooperation crossing disciplines has recently become more important, it would be useful that SCA is used as a platform for inter-disciplinary networking among specialised institutions in member countries. For instance, an interactive workshop between social science research bodies and brain science institutions in Asia could be considered. To this end, it would be effective to find and introduce some promising inter-disciplinary projects at JPWS.

## 5.2 Enhancing trans-disciplinary activities, including Future Earth

Recently, inter- and trans-disciplinary activities and initiatives which involve various stakeholders have become more important. Such trends can often be seen in international academic or science programs, such as Future Earth and some preliminary undertakings toward realisation of the SDGs. SCA should provide the world with useful academic information that originate in Asia, and lead the global research activities in these fields. As discussed hitherto, as SCA covers a wide range of academic fields and organisations, it has some distinctive advantages in implementing inter- and trans-disciplinary activities. Therefore, putting forward these undertakings further in depth would increase the importance of SCA in our society. In particular, a session on Future Earth is planned at the 2016 Conference, and the SDGs would be one of the possible topics of the upcoming Conference in Bangladesh in 2018, which are most encouraging. Some other possible issues that could be addressed at future Conferences would be the ones related to scientific endeavours with regard to the Paris Agreement at COP21 and research implementation and follow-ups to the Sendai Framework for Disaster Risk Reduction, among others, and SCA could be a useful platform for scientific collaboration among Asian scientists in these fields. Concerning Future Earth, especially as one of the five Global Hubs is located in Tokyo and the Asian Regional Office is in Kyoto, Japan, strengthening the collaboration with the FE initiative would be a useful stepping stone to SCA's initiative in promoting and disseminating Asia's scientific achievements.

## 6. Strategic objectives

Based on the recommendations of the Committee on Future Strategy, SCA set the following strategic objectives for actions.

Strategic objectives:

1. Since the importance of Asia in the global sustainable development has increased,



SCA should strengthen its science advice function with inter- and trans-disciplinary insights through participation in some international fora, such as INGSA, in order to expedite social innovation in member countries and the region.

2. For the scientific development of Asia as a whole, SCA should strengthen cooperation with scientific organisations in Asia, including non-members, as well as specialised research institutions, and networking among member organisations through various channels, while maintaining its current unique framework.
3. In order to enrich its science advice and increase its social impact, SCA should strengthen the contents of Conferences and workshops, addressing globally as well as regionally relevance problems through bi- and multi-lateral science cooperation. In particular, cooperation with other international organisations and young academies should be pursued further.
4. SCA should improve the visibility of its scientific activities and achievements, further enhancing academic outreach activities including publication of research papers in international academic journals.
5. SCA should take a role of Asia's regional platform for international academic endeavours in various disciplines as well as in inter- and trans-disciplinary issues.

## Appendix 1: Brief history of SCA

SCA started with 16 scientific organisations from 10 countries in 2001, namely: China (CAST), India (ICSSR), Indonesia (LIPI, Ministry of Education & Culture), Japan (SCJ), the Republic of Korea (NAS, KAST), Malaysia (ASM, MOSTE (now MOSTD), the Philippines (NRCP, PSSC), Singapore (NSTB (now A\*STAR)), Thailand (TAST, NRCT), and Vietnam (MOST, MOH).

Since then, the number of member academies has increased as follows.

- At the 2nd Conference in 2002, LESTARI from Malaysia, PAMS from the Philippines, and SST from Thailand became members.
- At the 4th Conference in 2004, MAS from Mongolia became a member.
- At the 11th Conference in 2011, BAS from Bangladesh became a member.
- AT the 12th Conference in 2012, ITC and RAC from Cambodia, MAT from Myanmar, NAST from Nepal, NASSL and NSF from Sri Lanka, and VAST from Vietnam became members.
- At the 14th Conference in 2014, Academia Sinica from China: Taipei, and MAAS from Myanmar became members.
- The 15th Conference in 2015, INSA from India, and PAS from Pakistan became members.

## Appendix 2: Extracts from SCA Statutes

### Article 2: Objectives

The objectives of the SCA are:

- a. to provide scientist in all fields, including cultural and social as well as natural sciences and technology, a collaborative platform for promoting scientific exchange and cooperation in Asia for the improvement of human society, and,
- b. to develop and promote a holistic vision by integrating the emerging advances in science and technology with Asia wisdom, values and heritage, focusing on sustainable development and improvement in quality of life.

### Appendix 3: Acronyms and abbreviations

AASA: Associations of Academies of Sciences in Asia  
AASSA: Association of Academies and Societies of Sciences in Asia  
AASSREC: Association of Asian Social Science Research Councils  
ACSC: Asian Conference on Scientific Cooperation  
AMRO: ASEAN+3 Macroeconomic Research Office  
APEC: Asia Pacific Economic Cooperation  
ASEAN: Association of Southeast Asian Nations  
COP21: 2015 United Nations Climate Change Conference  
FASAS: Federation of Asian Scientific Academies of Societies.  
FE: Future Earth  
GA: General Assembly, of SCA  
GYA: Global Young Academy  
IAP: InterAcademy Partnership  
ICSU: International Council for Science  
ICSU-ROAP: ICSU Regional Office for Asia and the Pacific  
ICT: Information and Communication Technology  
ISBN: International Standard Book Number  
ISSC: International Social Science Council  
JICA: Japan International Cooperation Agency  
JPWS: Joint Project Workshop  
MB: Management Board, of SCA  
MDGs: Millennium Development Goals  
MoU: Memorandum of Understanding  
OECD: Organisation for Economic Co-operation and Development  
PSA: Pacific Science Association  
SATREPS: Science and Technology Research Partnership for Sustainable Development  
SCA: Science Council of Asia  
SCJ: Science Council of Japan  
SDGs: Sustainable Development Goals  
UN: United Nations  
UNESCO: United Nations Educational, Scientific and Cultural Organization  
WSF: World Science Forum