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SOUTH-SOUTH COOPERATION

**South-South and Triangular Cooperation in Asia-Pacific:
Towards a new paradigm in development cooperation¹**

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Only for discussion and comments*

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South-South and Triangular Cooperation in Asia-Pacific: Towards a new paradigm in development cooperation

1. Introduction

South-South Cooperation (SSC) received considerable attention as a philosophy for development during the 1960s and 1970s. These were the times when developing countries, having coming out of the yoke of colonization, were struggling with the poverty and underdevelopment. The lack of financial and technological resources and the western apathy forced them to look to collective self-reliance as an engine of growth. The Non-aligned Movement (NAM) came into being. Initiatives taken by developing countries also led to creation of UNCTAD, and the Group of 77 in the 1960s. The South Commission was set up in the mid-1980s. A more compact Group-15 of developing countries with annual Summits was set up in the late 1980s. Besides these forums for dialogue, the institutional infrastructure for promoting SSC included the setting up of preferential trade agreements between developing countries including the Bangkok Agreement in Asia as in other regions, and the GSTP (Global System for Trade Preferences), in addition to several institutions set up to contribute to capacity building. Even though capacities were limited, developing countries started assisting each other. China built the Tanzania-Zambia Railway in the late 1960s and India, the Tribhuvan Highway in Nepal.² India started her technical and economic assistance programme (ITEC) for co-developing countries also in 1960s.

SSC suffered a setback during the late 1980s and the 1990s, however, as a large number of developing countries faced financial crisis against the backdrop of declining resource flows and were forced to approach the Brettonwoods institutions for assistance which generally came with the conditionalities binding them firmly with the Washington Consensus. The latter required the borrowing countries to liberalize their trade and investment regimes to integrate themselves more firmly within the world economy. Under the Uruguay Round of trade negotiations under GATT, developing countries were also pushed to take substantial commitments to liberalize their trade policy regimes. A number of policy interventions that were hitherto subject to decision-making at the national level and had been extensively employed by developed countries in their own process of development came under the purview of the WTO discipline such as the intellectual property regime (IPRs) or the industrial policy. Thus in 1990 when the South Commission Report was released, developing countries were described as existing on the periphery of the North, mostly weak and powerless in the world arena.

With continuous struggle for development, things have changed over time and the South has now emerged as an important player on the world economic stage. In terms of GDP, saving, investment, exports, imports, foreign exchange reserves, financial assets at home and abroad, quality and size of its corporate world, IT capabilities, and capability in manufacturing, the South is rapidly catching up with the North. Yet within this overall picture, there are major

² See Kumar (1987a and 1987b) for a historical perspective.

disparities in the South, between regions and within regions. Developing countries face major challenges in achieving the internationally agreed Millennium Development Goals (MDGs). Development patterns of the past decades suggest that the South is no longer one 'backward' group. Different countries and even sub-regions within the countries are at vastly different 'stages of development'. Thus the complementarities within the group have increased tremendously. Southern countries can help each other in the vital areas such as trade, finance, investment, energy, environment, labour mobility, technology, designing of development strategy and sharing development experiences accumulated over the past decades for mutual benefit. Therefore, SSC has now attained a new salience and viability. South-South trade and investments have been growing rapidly and have become a significant proportion of global trade and investment flows. A number of initiatives and programmes of economic and technical cooperation between developing countries have taken off and new ones are being designed with every passing day. Here mention may be made of the emergence and revitalization of a number of associations for regional cooperation between developing countries in different parts of the world, of numerous bilateral preferential trading and comprehensive economic cooperation arrangements between them and the emergence of inter-regional groupings like India-Brazil-South Africa (IBSA) Trilateral Commission for promoting SSC not only between themselves but also globally. A relatively new trend reinforcing SSC is of triangular development cooperation (TDC) with Northern countries and multilateral agencies supporting the programmes of cooperation between developing countries. TDC has the potential to strengthen the SSC and enhance its effectiveness in the coming years.

Against that background, this paper reviews the relevance of SSC and TDC and the emerging trends and patterns in the Asia Pacific region. It then discusses the policy challenges for exploiting the full potential of SSC and TDC and enhancing their effectiveness. The focus of the study is on SSC activities undertaken by select major developing (viz. non-OECD/DAC members) countries in the Asia-Pacific region and SSC activities supported by Asian members of OECD as well as involving multilateral agencies.

2. Relevance and Emerging Patterns in SSC and TDC

The relevance of SSC arises from the replicability of development experiences of one country to other co-developing countries. SSC is undertaken by developing countries as a part of partnership and solidarity for development rather than development assistance or aid. In the process of their development, developing countries accumulate valuable lessons, skills and expertise that can be valuable for other developing countries. These skills and capabilities are often more appropriate than those available from industrialized countries due to shared development challenges faced by them. The appropriateness of developing country skills and technologies arises from a number of reasons.

Firstly, developing country skills are evolved in an environment of similar factor endowments e.g. labour abundance and relative capital scarcity. Hence, developing country technical solutions may be labour intensive rather than automated solutions available from industrialized countries.

Secondly, developing country technological solutions are evolved in an environment of relatively poorer infrastructure and hence may be more appropriate compared to those available in industrialized countries. For instance, telecommunication switching technologies not requiring air-conditioning, vehicles with more rugged suspensions to work in poor road conditions, among others.

Thirdly, the developing country expertise may be more attuned to similar geo-climatic conditions (e.g. tropical rather than temperate climate) compared to those in the industrialized countries.³ For instance, the expertise required for food preservation in a tropical location would be quite different compared to one in temperate climatic conditions. It is for this reason perhaps that SSC is generally concentrated within the regions.

Fourthly, technologies and expertise available in developing countries are likely to be scaled down to scales more appropriate to the size of markets in developing countries compared to mass production skills in industrialized countries.

Fifthly, the technologies and expertise available from developing countries are likely to be cost effective having been adapted in view of low income consumers in developing countries. Developing countries in Asia have emerged as most cost effective suppliers of generic medicines, IT solutions, vehicles and other capital equipment. Another aspect of cost effectiveness is the fact that SSC is generally devoid of conditionalities that often accompany the development assistance provided by the DAC countries. For this reason SSC can be more focused on specific projects, and quicker raising the overall effectiveness. Furthermore, empirical studies find that project assistance (such as those extended by developing countries) has a positive significant effect on growth while the impact of financial programme aid (which is generally extended by DAC donors) is negative.⁴

Finally, given the arguments regarding the lower costs and appropriateness of skills and expertise available in the South, TDC can achieve much greater effectiveness per unit of resources spent compared to traditional N-S development assistance relationships. For instance, given the relative costs of living and cost of skills, a capacity building program conducted in a location like Bangkok, Jakarta, Colombo or Hyderabad would be far more cost effective than one conducted in Tokyo.

It is because of these reasons that developing countries are better placed to respond to the needs and problems of co-developing countries with more appropriate and cost effective solutions. Hence, SSC and TDC have been put at the centre of development agenda since the Buenos Aires Plan of Action, the Havana Plan of Action 2000, Marrakech Declaration 2003, South Summit 2005, and are promoted as complements to development assistance provided by DAC countries for assisting developing countries in the Asia Pacific region in achieving their MDGs.

Drivers of SSC and TDC in Asia-Pacific Region

The rapid growth observed in the SSC and TDC in the Asia Pacific region in recent years has been driven by a number of factors as follows:

The rise of Emerging Countries: Over the past few decades a number of economies in Asia have emerged as some of the most dynamic in the world. The initial bunch of newly industrialized economies in the region included the Republic of Korea, Taiwan, Hong Kong - China, and Singapore, Malaysia, Thailand have been joined by large populous countries such as China and India in more recent years. These countries have accumulated considerable expertise and capabilities in their process of development. SSC is becoming more significant with emerging countries making new, more ambitious commitments. The emergence of new growth poles in different regions in the South is reshaping the economic geography and creating new dynamics

³ Juma et al (2005) argue that technological advances made in the temperate zones may have little bearing on the problems of the tropics.

⁴ Ouattara and Strobl (2008) for evidence.

in trade, investment and development cooperation from and within the South.⁵

Rising Diversity and Complementarities in Asia: The range of complementarities has widened with their rise and accumulation of capabilities over time. In particular the diversity in levels of development and hence range of complementarities has widened in Asia, as is clear from Table 1. The Table shows that the standard deviation from mean of per capita incomes in Asia has nearly doubled over the 1980-2006 period, while it has increased by a much smaller proportion in other developing continents.

**Table 1: Variation in GDP Per Capita Across Countries
(constant 2000 US\$)**

Country Name	GDP Per Capita (constant 2000 US\$)		% Change
	1980	2006	
Asia			
Mean	636.71	1379.42	
Median	396.63	1069.66	
Maximum	1848.21	4535.40	
Minimum	140.08	242.48	
Std. Dev.	590.40	1182.22	197.26
Latina America & the Caribbean			
Mean	2529.42	3396.14	
Median	1897.95	2745.55	
Maximum	7550.76	8692.57	
Minimum	804.43	405.51	
Std. Dev.	1732.61	2165.24	49.04
Middle East & North Africa			
Mean	1847.52	2578.27	
Median	1464.23	1977.53	
Maximum	4686.31	7066.53	
Minimum	881.97	1286.53	
Std. Dev.	1318.48	2003.27	29.92
Sub-Saharan Africa			
Mean	827.83	1061.60	
Median	344.16	375.23	
Maximum	5271.41	7004.92	
Minimum	135.44	90.77	
Std. Dev.	1167.92	1602.75	64.01

Source: Computed on the basis of World Bank's *World Development Indicators 2008* data.

Another indication of rising complementarities among Asian developing countries is clear from a growing proportion of intra-regional trade and investment flows. The proportion of intra-regional trade in Asia has crossed 55 per cent and the largest trade partners of most of the Asian countries are now within the region. Similarly intra-regional investments in Asia have

⁵ United Nations (2007a).

been rising with the emergence of China and India as sources of outward investments besides other established sources such as Singapore, Malaysia, Thailand, the Republic of Korea and Hong Kong- China.⁶ These countries are emerging as important sources of FDI in Asian countries especially the LDCs. The UN (2007 state of SSC) report cites a World Bank source suggesting that even banks based in developing countries are becoming important sources of lending to poorer countries with 27 per cent of foreign bank assets in low income countries being held by developing countries banks. However, as with any private flows, it is possible that these flows may not be reaching the poorest countries.

Recognition of Regional Interdependence and rise of Regional Cooperation: The bulk of SSC is undertaken intra-regionally. It is a result of the growing recognition of regional interdependence. The East Asian crisis of 1997 highlighted the regional interdependence of Southeast and East Asian countries and has led to a number of initiatives for regional cooperation such as the Chiang Mai Initiative among others launched within the framework of ASEAN+3. Over time a number of initiatives of cooperation have been undertaken by Asia-Pacific countries at bilateral, sub-regional and broader regional levels (see Box 1).

Growing Interest of Northern Donors in Supporting SSC: Another reason of the growing popularity of SSC in recent years is the growing recognition of the potential of TDC by traditional donors and their support to the SSC. In particular Japan has emerged as an important pioneer in this direction supporting SSC activities especially in capacity building in Asia Pacific region, as is summarized later. Even though developing countries may have development experiences to share with other developing countries, their funding capacities may be limited. Hence, TDC is a win-win approach to meet the ends of both Northern as well as Southern partners.

Box 1: Regional Economic Integration and Cooperation in Asia

Asian developing countries have made a number of attempts at regional economic cooperation in the 1970s promoted by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). These include the Bangkok Agreement established in 1975 which covered reciprocal tariff concessions between five member States, namely Bangladesh, India, Lao People's Democratic Republic (PDR), Republic of Korea and Sri Lanka. In 2000, China also joined the Bangkok Agreement. The Asian Clearing Union with seven members in the region (Bangladesh, India, Iran, Myanmar, Nepal, Pakistan and Sri Lanka) came into being in 1974. It is generally agreed, however, that these early experiences have not been very successful. The expectations for these initiatives have not been met for various reasons. For instance, the Bangkok Agreement has suffered from its limited membership and product coverage, shallow preference margins and lack of coverage of non-tariff barriers.

Although set up in 1967, ASEAN had limited cooperation in economic areas until the ASEAN Free Trade Area (AFTA) was established in 1992. Similarly, SAARC came into being in 1985 but did not adopt a programme of economic cooperation until 1991 with the formation of the Committee on Economic Cooperation (CEC). It created a SAARC Preferential Trading Agreement (SAPTA) in 1995 and in 2004 eventually agreed to create a SAARC Free Trade Area (SAFTA) to be implemented over 10 years. Besides regional economic integration, BTAs between India and Nepal and between India and Sri Lanka have also speeded-up economic integration in the South Asian subregion. Another notable initiative in Asia is BIMSTEC involving five South Asian (Bangladesh, Bhutan, India, Nepal, and Sri Lanka) and two South-East Asian (Myanmar and Thailand) nations, bridging the two subregions. BIMSTEC adopted a Framework Agreement for an FTA to be implemented within 10 years at its first summit held in Bangkok in July 2004.

Each of these regional groupings has extensive programmes of cooperation besides trade and investment liberalization as a part of their agenda. A number of regional centres have also been set up under SAARC economic cooperation and a SAARC Development Fund.

The East Asian crisis of 1997-98 highlighted the importance of regional economic cooperation and provided a much needed stimulus for regional economic integration. ASEAN countries expedited the programme of implementation of AFTA from 2008 to 2002 and moved on to deepen economic integration further. The crisis also led to the launch of several regional initiatives such as the Chiang Mai Initiative (CMI) which involves ASEAN together with China, Japan and Republic of Korea – the ASEAN+3 countries. In addition, ASEAN's policy of engaging key Asian countries as dialogue partners has provided much needed cohesion in the Asian region as is clear from the numerous schemes for regional and bilateral free trade

⁶ see UNCTAD (2008); Kumar (2008) for a discussion on outward FDI originating from emerging countries.

arrangements that are at different levels of implementation. China, India, Japan and Republic of Korea are all engaged in negotiations of FTAs with ASEAN and also with each other.

To sum up, initiatives towards regional economic integration include the following:

- Subregional attempts such as those by ASEAN, SAARC and BIMSTEC to form FTAs and further deepen economic integration;
- FTAs or comprehensive partnership arrangements between ASEAN and its dialogue partners, namely China, India, Japan and Republic of Korea; and also between ASEAN and CER (Australia-New Zealand)
- FTAs or comprehensive arrangements between individual ASEAN countries and ASEAN dialogue partners, for example Japan-Singapore, India-Singapore and India-Thailand; and
- FTAs or comprehensive arrangements between the dialogue partners themselves, such as India-Japan, India-Republic of Korea (under negotiation and India-China, India-Australia and India New Zealand (under study)).

Another feature of the ongoing schemes of regional cooperation viz. SAARC, ASEAN, ASEAN+1 dialogue partnerships, ASEAN+3 and EAS is that each one of them involves considerable mutual cooperation among the member countries. The cooperation takes the form of initiatives to narrow the development gaps between them, capacity building, special and differential treatment for LDCs. In the framework of ASEAN, there is a programme for Initiative for ASEAN Integration (IAI) designed to narrow the development gap between the older and newer member countries of ASEAN. All the dialogue partners of ASEAN also contribute to IAI and are cooperating with ASEAN countries in different sectors.

There is now growing recognition in Asia of the importance of regional economic integration for generating growth impulses from within. There have been initiatives for functional regional cooperation, such as Thailand's launch of the Asian Cooperation Dialogue (ACD) in 2002 at Cha-Am, Thailand. The ACD is the inter-governmental dialogue and cooperation in Asia, focusing on promoting regional cohesion among regional organizations such as ASEAN, SAARC or the Gulf Cooperation Council. The latest 6th ACD Ministerial Meeting was convened on 5-6 June, 2007 in Seoul, the Republic of Korea, addressing the promotion of IT cooperation in Asia. Similarly, the Boao Forum for Asia (BFA) was initiated by China in 2001 at Boao, in Hainan province of China, as a pan-Asian economic forum where the leaders from Asia and the globe gather to foster Asian economic integration. The recent BFA Annual Conference 2007 was held on April 21, 2007 in Boao, China and attended by a total of 1,410 government leaders, top business executives, scholars and media representatives. India hosted a meeting of Asian energy ministers in early-2005 in New Delhi to advance cooperation in this area. Further attempt on regional cooperation in energy was emphasized during the first East Asian Summit (EAS) Energy Ministers' Meeting in Singapore in August, 2007. Furthermore, pooling capabilities and resources in information technologies (IT) for addressing the common needs of the region was considered at the Asian IT Ministers meeting in Hyderabad, India in early-2004.

A virtual Asian grouping may be emerging from the complex web of trading arrangements linking ASEAN countries with their dialogue partners in different stages of evolution. However, it can be argued that subregional and bilateral attempts at regional cooperation, while desirable, are unlikely to exploit the full potential of regional economic integration in Asia and, hence, are suboptimal. This is because the extent of complementarities at subregional levels is limited because of similar factor endowments and economic structures within a neighbourhood. This is clear from the fact that trade between ASEAN or SAARC countries and East Asian countries is much larger than the trade within each subregion. It is for this reason that the success achieved so far from subregional or bilateral attempts at cooperation has been meagre. At the broader Asian level, the differences in levels of economic development and capabilities are quite wide thus providing for more extensive and mutually beneficial linkages. The range of economic structures within the region provides its own indigenous capacity for dynamic industrial restructuring on the basis of 'flying geese' patterns. Hence, Asia needs an overarching, region-wide scheme of economic integration to exploit the full potential for efficiency-seeking industrial restructuring and the synergies that exist in the region. Among other factors, the twin scourges of regional natural disasters, such as the Severe Acute Respiratory Syndrome (SARS) epidemic or the December 2004 tsunami, together with the threat posed by terrorism have also promoted East Asian regionalism.

In the context of evolving a broader regional grouping in Asia, India has made a case for an Asian Economic Community (AEC) to begin with Japan, ASEAN countries, China, India, and Republic of Korea (JACIK) which could emerge as an 'arc of advantage' across which there would be a large-scale movement of people, capital, ideas and creativity, thereby creating a community that would release enormous creative energies.

In that context, the launch of the EAS in December 2005 in Kuala Lumpur is an important initiative. As the EAS brings together all the JACIK countries as well as Australia and New Zealand, a start can be made on broader regional integration in the EAS forum. The Second EAS held in Cebu, Philippines, on 15 January 2007 endorsed the preparation of the track-II feasibility study of a Comprehensive Economic Partnership of East Asia (CEPEA) involving countries participating in the EAS. EAS also adopted the Cebu Declaration on East Asian Energy Security, emphasizing the energy development of biofuels and agreed to launch economic cooperation in five areas including natural disasters, cultural and education, finance, science and technology. EAS agreed to revive the ancient Nalanda University in India. An Economic Research Institute for ASEAN and East Asia (ERIA) has also been set up in 2008 within EAS framework.

Combining sixteen of the largest and fastest-growing economies of Asia-Pacific with significant complementarities, an EAS trade bloc is a more dynamic potential third pole of the world economy. The grouping has a population of 3 billion people or a half the world's population. In terms of purchasing power parity (PPP), the EAS grouping will have a combined gross national income exceeding US\$ 18 trillion accounting for one third of the global income is much larger than either NAFTA or the EU. EAS's exports will equal nearly US\$ 4 trillion much larger than combined reserves of the NAFTA and the EU. Clearly, the region would have sufficiently large market and financial resources to support and sustain expedited development.

Source: Kumar 2008

3. Emerging Trends and Patterns of SSC in Asia-Pacific

A review of the emerging trends and patterns in the SSC suggests that these activities have been undertaken by Asian developing countries such as China and India since the 1960s in spite of their constraints and resource problems as a part of their solidarity with co-developing countries. Over time their SSC activities have expanded considerably and more developing countries have joined them in offering development cooperation programmes such as Singapore, Malaysia, Thailand, among others. SSC activity in recent years has grown to a scale that is significant in terms of its proportion in the contributing countries national income as well as in terms of proportion of total development cooperation effort globally, especially in the context of stagnating development assistance provided by the DAC countries.

A recent background study done for the DCF in trends in SSC and TDC estimated that Southern countries' economic assistance amounted to be between US\$ 9.5 billion to \$12.1 billion in 2006 representing 7.8 to 9.8 per cent of total development cooperation related flows in the year.⁷ These figures are likely to be underestimates as due to differences in definitions contributions to multilateral institutions and contributions of smaller contributors were not covered. Even though smaller countries and LDCs may lack financial capacities, they do undertake some SSC programmes. An important case in this respect is of Bangladesh, herself an LDC, has started sharing her valuable experiences in micro-financing (see Box 2). The study projected Southern development cooperation to be reaching US 15 billion by 2010 in view of large commitments being announced by emerging Asian countries such as China and India.

Box 2: Development Cooperation Activities of Bangladesh

Although Bangladesh is still a least developed country, it has offered capacity-building in areas where it has specific expertise, such as micro credit, population policies and rural development. The Bangladesh Academy for Rural Development, the Rural Development Academy and the Bangladesh Public Administration Training Centre have considerable expertise in micro credit, rural banking and income-generation activities, and can cater for the training needs of developing countries. Grameen Bank has also organized micro credit training programmes for participants from Indonesia, Malaysia, Nepal and Countries in Africa, and played an active role in organizing a summit on micro credit, which was held in Washington in February 1996. Bangladesh has a strong track record in establishing population policies, programmes and services that have helped to improve the general conditions of maternal and child health, lower birth rates and slow population growth. In recognition of this, the Partners in Population and Development secretariat was established in Dhaka to provide technical cooperation in the field of family planning to Colombia, Egypt, Indonesia, Kenya, Mexico, Morocco, Thailand, Tunisia and Zimbabwe.

Source: UN-ESCAP (2002)

Among the largest contributors to development cooperation were China, India, each contributing about US\$ 1 billion per annum followed by Republic of Korea and Turkey (both non-DAC members of OECD) contributing around US\$ 500 million p.a.⁸ Considering the fact that Asian countries are among the largest contributors of development cooperation, the relative significance of SSC is likely to be much greater in Asia-Pacific region than in other continents. This is consistent with our earlier observation that complementarities and diversity have increased in Asia. Furthermore, SSC in Asia-Pacific is likely to expand for another reason. Following its 2003 ODA Charter, Japan has emerged as a major DAC donor supporting triangular development cooperation as an effective aid modality.

⁷ UN ECOSOC (2008).

⁸ Ibid.

Development Cooperation in Asia-Pacific

Scale of Cooperation: Table 2 summarizes the key features of SSC activities of key Asian countries. It is apparent that China and India are beginning to spend between 0.08 to 0.11 per cent of their national income on SSC related activities, which is significant considering that these countries still are among the relatively lower per capita income group. It is likely that the scale of SSC in the Asia-Pacific region will rise significantly in the coming years in view of robust growth rates at which these Asian giants are growing and the ambitious commitments they are announcing. Both China and India have announced doubling of their assistance with Africa recently.⁹ Thirdly, to the extent Japan is expected to expand its triangular cooperation, SSC should receive a major boost in the coming years. While China and India remain major contributors to development cooperation among Asian developing countries, other countries such as Republic of Korea, Thailand, Malaysia and Singapore have joined them and it is expected that their cooperation activities will expand in the coming years.

However, the scale of SSC should not be judged in terms of traditional indicators that are employed for evaluating the scale of DAC countries economic assistance namely the size of overseas development assistance (ODA). Given their developing country status, they have limitations in providing concessional loans or grants. Their major contribution is in the form of projects and capacity-building and sharing development experiences. Given lower costs of developing country experts and equipment, the scale of these cooperation projects tends to be underestimated. It is here that more effort is needed in evolving definitions and guidelines for evaluating fuller scale of SSC.

Table 2: South-South Cooperation Activity of Major Asian Developing Countries per year, in 2006

Country (per capita income, 2006, US\$) (current account balance as a % of GDP)	Estimated Scale, US\$ million (% of GNI)	Recipient Countries	Geographical Focus of SSC	Scope of SSC
China (2016) (9.45)	1500-2000 (0.06-0.08)	86	44% to Sub-Saharan Africa; global allocation linked to one China policy	Mostly in the form of projects, in kind, technical cooperation and debt relief
India (822) (-1.03)	504-1000 (0.06-0.11)	156	More than 85% to Asia	Project oriented, technical cooperation, training and capacity-building, some debt relief; bilateral grants mainly to Bhutan, Nepal, Afghanistan.
Korea	579-885 (0.07-0.10)	123	61% to Asia	Technical cooperation grants (31%), project/programme grants (22%), bilateral loans (31%), debt relief for HIPC.
Malaysia (5770) (16.92)	16 (0.01)	-	Cambodia, Laos, Myanmar, and Vietnam (CLMV) and Indonesia	Bulk in the form of technical cooperation, some projects
Thailand (3252)	74 (0.04)	-	Mainly CLMV countries	80% in projects, 20% technical assistance

⁹ China announced doubling of its assistance to Africa by 2009 at the China-Africa Summit, 3-5 November 2007; India announced a similar intention at the occasion of the India-Africa Forum Summit held in New Delhi in April 2008.

(1.05)				
Singapore (29474) (27.49)	-	-	Mainly CLMV countries	Technical cooperation with a focus on capacity-building; third country training programmes with 16 countries and 19 international organizations
Turkey	714 (0.18)	84	83% to Asia	Project and programme aid (30%), technical cooperation (26%), 'aid to refugees in donor countries.'
Russia *	considerable until 1990s	-	Cambodia, Laos, Mongolia and Vietnam, and other former Soviet Unit countries	Financial aid, technical assistance, etc.

Source: compiled from UN (2008) and respective country sources. * UN-ESCAP (2002).

Geographical Coverage: The geographical coverage of the development cooperation programmes of both China and India is extensive. China's cooperation activities extend to 86 countries all across the globe. A very considerable proportion of China's economic cooperation has focused on natural resource rich African countries such as Angola, Sudan, Zambia, Rwanda, among others. However, China is also cooperating with a number of Asian developing countries such as Cambodia, Vietnam, Myanmar, Thailand, Philippines, Bangladesh, Nepal, Sri Lanka, Pakistan, and Afghanistan among others.

Indian technical cooperation programmes reach out to 156 countries in Asia, East Europe, Central Asia, Africa, and Latin America under its Indian Technical and Economic Cooperation (ITEC) programme and Special Commonwealth Assistance for Africa Programme for Africa (SCAAP). However, the economic cooperation grants and loans are highly concentrated in smaller and poorer countries in South Asia. The bulk of it is accounted for by Bhutan, Nepal, and Afghanistan. The rest is shared by Sri Lanka, Myanmar, Bangladesh, Maldives, and African countries.¹⁰

Scope of Economic Cooperation: The economic cooperation projects by Asian countries have covered infrastructure development, equipments and experts, capacity building programmes and market access. Some examples are summarized below just to provide an idea of the range of projects rather than as exhaustive compilation.

China

- Among developing countries, China has the most comprehensive and ambitious development cooperation programme with very wide range of development projects all across the developing countries. A few examples are constructing two bridges, a hydroelectric plant and an optical fiber network in Cambodia; loans for building a sky train and for improving water supply for Manila, building a deep sea port and a special economic zone in Pakistan, assistance has been provided to Angola for energy projects and drinking water, Botswana for road development; Ghana, Mozambique and Nigeria for dams and power; Namibia for transport infrastructure; Eritrea, Kenya and Tunisia for telecommunications infrastructure.

¹⁰ Source: Indian Government Budget documents. According to the 2008/09 Budget, the allocation was as follows: Bhutan - Rs 9530 million, Afghanistan - Rs 4450 million, Nepal – Rs 1000 million, Bangladesh – Rs 160 million, Sri Lanka – 340 million, Maldives – Rs 177 million, Myanmar – Rs 560 million, African countries -800 million, Other developing countries – 1800 million; ITEC programme – Rs 650 million. These figures, however, do not include grants routed through multilateral agencies. They also cover only direct expenses rather than full accounting of costs of capacity building or projects.

- China is involved in GMS (Greater Mekong Sub-region Economic Programme) programme supported by ADB covering Lao PDR, Myanmar, Thailand, and Vietnam and in CAREC (Central Asia Regional Economic Cooperation) supported by ADB involving Afghanistan, Azerbaijan, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, Uzbekistan.
 - China is providing assistance to Uganda for ICT backbone, fiber optic links in DRC and electronics in Namibia.
 - At the China-Africa Summit held in November 2006, it was decided to double the assistance to Africa by 2009, providing US\$ 5 billion in the form of loans and credits, setting up of China-Africa Development Fund with a reserve of US\$ 5 billion to assist Chinese companies in their business endeavours in Africa, building a conference centre for the African Union, cancelling debts of HIPC countries, opening up the Chinese market for LDCs by increasing the number of export items provided zero duty to 440 from 190, and setting up 5 trade and economic cooperation zones. By 2009, China proposes to train 15000 African professionals, send 100 senior agricultural experts to Africa, set up 10 special agricultural technology demonstration centers, build 30 hospitals, increase the Chinese government scholarships for African students from 2000 to 4000.¹¹
- **India**
 - India has assisted Bhutan in exploiting her hydroelectric power generation potential through assisting in construction of Chukha and Tala hydroelectric projects, among others which export surplus power to India. Equipment and expertise for agricultural development were provided to Ghana, Senegal, Burkina Faso, Mali, and Suriname. Other projects included improving sugar production facilities in Ethiopia, production of agricultural equipments in Senegal and Botswana.
 - India has built hospitals in Afghanistan, Nepal, Maldives, Laos, and Ethiopia. India is also extending health services throughout the SAARC region through telemedicine networks. Vocational training centers, SMEs and entrepreneurship development centers have been set up in Vietnam, Cambodia, Laos, Zimbabwe and Senegal, and Indonesia (for construction sector), a vocational training centre for women in Afghanistan, Machine Tools Centre in Nigeria, SME development in Tanzania, and a plastic technology centre in Namibia. In 2004, India launched a new initiative for 8 West African countries viz. Senegal, Mali, Guinea-Bissau, Ivory Coast, Ghana, Equatorial Guinea, Burkina Faso and Chad, called TEAM-9 under which India offered a concessional credit of US\$ 500 million and technical assistance and critical technologies.
 - Several programmes in ICT, the most ambitious of which is the setting up of a pan-African e-network connecting 53 African countries through a satellite link. This network will also connect academic institutions and hospitals in African countries with their counterparts in India for providing tele-education and telemedicine facilities. A Kofi Annan Centre for Excellence in ICT was set up in Ghana, as well as a technology centre at the Harare Institute of Technology and at Bulawayo Polytechnic in Zimbabwe, a telecom network in Benin and a cyber city in Mauritius. Indira Gandhi National Open University runs 300 study centers in 38 countries in Africa, Gulf and Central Asia.

¹¹ Among other sources, Chin and Frolic (2007).

- Under the Indian Technical and Economic Cooperation (ITEC) Programme, 45 institutions in different parts of the country conduct 206 training courses covering nearly 4000 foreign trainees from 156 countries every year. The courses cover a variety of subjects but with a concentration in IT. These are students coming to India for higher studies. These are over 15000 African students who join Indian colleges and Universities every year.
 - India is involved in a number of programmes of sub-regional cooperation such as MGC (Mekong Ganga Cooperation) with CLMV countries and Thailand, BIMSTEC with South Asian countries, Thailand and Myanmar. Under the Initiative for ASEAN Integration, it has set up training centers for entrepreneurship development in the CLMV countries besides offering places for training in India as a part of a multifaceted ASEAN-India cooperation.
 - India announced a duty free entry for products of LDCs covering 94 per cent of total tariff lines and covering 92.5 per cent of India's imports from them.¹²
- **The Republic of Korea**
 - Key partner countries in KOICA (Korean International Cooperation Agency) include Iraq, Pakistan, Egypt, Sri Lanka and Vietnam.
 - The major projects undertaken in 2006 include upgrading Jaffna Technical College in Sri Lanka, and constructing Zahira College; constructing Korea-Indonesia Technical & Cultural Cooperation Centre; developing capacity of the vocational training centre in Myanmar; improving ICT education at the college of engineering and technology in Tanzania; upgrading auto-maintenance vocational training centre in Guiza, Egypt.¹³
- **Thailand**
 - Thailand is assisting Sri Lanka in rehabilitation process and Bhutan in human resource development, support for a sustainable development project in Afghanistan, technical cooperation project with Jordan in agriculture, tourism and small scale fishery project in Mozambique, sustainable agriculture project in Lesotho, a gem cutting in Madagascar, among others.
 - Cooperation programmes with Southeast Asian countries such as Malaysia, Indonesia, Timor-Leste, Pacific Island countries, CLMV countries, and under BIMSTEC mainly in agriculture and health related fields
 - Capacity building programmes e.g. Thai international postgraduate programme (TIPP), annual training course (AITC), annual training course supported by triangular donors such as JICA, Colombo Plan Secretariat, UNDP, UNFPA and UNICEF.¹⁴
- **Malaysia**
 - Malaysian Technical Cooperation Programme (MTCP) administered by Economic Planning Unit (EPU) initially confined to nine ASEAN countries now reaches out to 133 countries across the world providing technical and academic skills and training. Malaysia also provides assistance for setting up a Women Development Centre and a clinic in Cambodia, assistance to Vietnam for rubber

¹² Sources: <http://itec.nic.in>; Agrawal (2007), Sharma (2007).

¹³ Source: www.koica.go.kr/english/aid/education/index.html

¹⁴ Source: www.tica.thaigov.net

research and for setting up an industrial zone. Since 1992, Malaysian South-South Corporation (MASSCORP) has acted as a business information dissemination centre to enhance linkages among G-15 and African countries.

- MTCP offers short term training in diverse areas including ICT related course comprising 89 courses at 25 training institutions and government agencies. Long term training is also offered at a number of Malaysian universities. MTCP also organizes study tours and attachment programmes for many countries.
- MTCP collaborates with international organizations such as UNDP, ESCAP, UNIDO, JICA, Colombo Plan, CFTC, and Asia Pacific Development for Information Programme (APDIP) in triangular development cooperation programmes. Such programmes are also organized at the Japan Malaysia Training Institute, and other local universities in diverse areas including computer networking, SMEs promotion. Under ASEAN-Japan Tripartite Joint Development Project, Malaysia deputed 53 technicians in Cambodia for accelerating the pace of reconstruction.¹⁵

- **Singapore**

- As a part of Initiative for ASEAN Integration, Singapore has set up four training centers one in each CLMV countries. These centers have conducted more 330 courses and trained more than 6233 officers in diverse areas including English language, IT, trade and economic development, tourism among others. Singapore offers scholarships for ASEAN countries at its Universities. In addition, bilateral technical assistance programmes with developing countries across the world cover training courses and study trips in Singapore.
- Singapore provides third country training programmes (*triangular*) with 16 countries including Australia, India, Japan, the Republic of Korea, Thailand, New Zealand, and the European countries. It has also TDC arrangements with 19 international organizations including ADB, ADBI, Colombo Plan, Commonwealth Secretariat, ESCAP, IAEA, ICAO, IMO, IMF, UNDP, UNICEF, World Bank, WHO, WIPO, WTO, among others.¹⁶

4. Emerging Patterns in Triangular Development Cooperation (TDC) in Asia-Pacific

As observed above, SSC is being increasingly promoted and catalyzed by DAC donors and international agencies in view of its relevance for international partnership for development. TDC recognizes that developing countries are better placed in view of their more relevant expertise for responding to the needs of co-developing countries. It can be more cost effective compared to traditional North-South links. However, developing countries being short of resources have their limitations in fully exploiting the potential of SSC. Through TDC, it is possible to combine the expertise of developing countries and financial resources of developed countries for improved results. Triangular cooperation could thus assist in fuller exploitation of potential of SSC. International agencies such as UNDP, World Bank and regional development banks and DAC member governments support SSC. Japan has been a pioneer of TDC and has paid increasing attention to supporting SSC following the approval of its 2003 ODA Charter which identifies triangulation as an effective modality of promoting development cooperation.

¹⁵ source: mtcp.epu.jpm.my

¹⁶ Source: app.scp.gov.sg.

Even though it would be generally accepted that the scale of TDC has expanded in the past decade, it is very difficult to capture the magnitude of development cooperation that takes the form of TDC as DAC countries do not report it separately from bilateral cooperation. Therefore, one has to rely on anecdotal qualitative information to get an idea of emerging trends and patterns in TDC. In what follows, select TDC projects are listed to get an idea of its scope and coverage.

Intergovernmental TDC Programmes

- New Rice for Africa (NERICA): West Africa Rice Development Association (WARDA) developed a new rice variety combining best traits of African and Asian rice varieties in 1994. As a major collaborative project, it involved institutions in Japan, China, 17 African countries, CGIAR institutions, with support from Japanese government, UNDP, African Development Bank, FAO, USAID, Rockefeller Foundation, and the World Bank. The growing demand for NERICA has led to the creation of African Rice Association (ARI) which is seeking to expand cultivated areas to 210,000 hectares in West and Central Africa, exposing more than 1.7 million African farmers to NERICA, and increasing the African rice production to 744,000 tones resulting into a saving of US\$ 88 million in rice imports per year.¹⁷
- Asia-Pacific Development Centre on Disability (APCD): JICA and the Government of Thailand have joined hands to establish a regional centre to promote empowerment of persons with disabilities and a barrier free society in developing countries in Asia-Pacific. Set up in 2002, the Centre has started conducting third-country training courses for other Asia-Pacific countries on ICT, community based rehabilitation, disability equality training among others for empowering the disabled participants from Thailand as well as from CLMV countries and the region to enhance inclusiveness.¹⁸
- JICA-ASEAN Regional Cooperation Meeting (JARCOM): JARCOM is hosted jointly by JICA and ASEAN countries on a rotating basis. JICA assists cooperation projects between older ASEAN countries and new ASEAN countries namely Cambodia, Laos, Myanmar, and Vietnam (CLMV) countries to narrow development gaps. Japan had concluded partnership programmes with Singapore, Thailand, the Philippines and Indonesia for SSC by 2005.¹⁹
- ASEAN Institute for Health Development (Mahidol University, Thailand): AIHD was set up with Japanese assistance and implements third country training programmes for participants from the regional countries on primary health care, HIV/AIDS prevention and health care for AIDS patients.²⁰
- Rural Development Project in Cambodia: This project is seeking to improve the livelihood of internally displaced people and local villagers in two Cambodian provinces with a population of 1.4 million. It supported food production, income-generating activities, public health and basic education through a series of community development activities. It assisted in forming 1930 farmer groups and trained over 120,000 farmers in improving agriculture leading to higher productivity. It has established a micro-financing programme and an NGO to manage the programme. It has involved UNOPS, the governments of Indonesia, Thailand, Malaysia and the Philippines supported by the Japan International

¹⁷ UNDP-SU/SSC (2005) UNDP/Japan Partnership

¹⁸ source: www.apcdproject.org; JICA (2008).

¹⁹ JICA (2005).

²⁰ JICA (2003)

Cooperation Centre.²¹

- Africa-Asia SMEs Network Programme: This project supports the transfer and sharing of best practices in the area of promotion and support of SMEs in Asia and Africa through establishment of TECHONET Africa supported by UNDP and eight Asian countries including Malaysia, Republic of Korea, and Thailand, of TECHONET Asia which has rich experience in promoting SMEs in Asia. The first phase during 2004-07 was expected to cover transfer of knowledge under the TECHONET Network Africa involving 7 African countries viz. Cameroon, Ghana, Mozambique, Nigeria, South Africa, Uganda, and Tanzania, policy and institutional reform for SME development, and capacity development for trade and investment promotion.²²
- Thailand-Japan Technical Partnership for Africa: It aims to promote SSC between Asia and Africa as a follow up measure of TICAD (Tokyo International Conference on African Development)-III.²³
- SSC in the Framework of East Asia Summit (EAS): The launch of EAS in December 2005 in Kuala Lumpur with participation of leaders of ASEAN countries and their six dialogue partners viz. Japan, China, the Republic of Korea, India, Australia and New Zealand has provided a forum for regional cooperation. At the Second EAS held in Cebu in January 2007, Japan announced an energy cooperation initiative principally aimed at improving regional cooperation in energy efficiency and conservation. Japan also announced a JENESYS programme that will involve an exchange programme bringing 6000 young people mainly from EAS countries to Japan.
- As observed earlier, Singapore is most active in TDC conducting third-country training programmes with 16 countries and 19 international organizations.

TDC Programmes run by Multilateral Bodies

- South-South Trust Fund at UNDP: SSTF was established at UNDP to promote SSC. By 2004, SSTF has reached US\$ 33 million contributions. Japan with a contribution of US\$ 28.4 million was the largest contributor (in the form of Japan Human Resource Development Fund) followed by China and the Republic of Korea. This fund provides cost sharing arrangements, resources for government agencies, civil society for SSC.²⁴
- IBSA Fund for Poverty and Hunger Alleviation: India-Brazil-South Africa Trilateral Commission has set up an IBSA Fund which funds poverty reduction and capacity building in developing countries. The IBSA Fund is administered by the UNDP. Each country contributes \$1 million every year to the fund. Projects have been undertaken in Guinea-Bissau and Haiti. IBSA Fund received the United Nations South Alliance Award, as an example of how South-South cooperation can have an impact in the daily life of people in need.
- UNESCO's E-9 Initiative for SSC: The E-9 Initiative (Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria, and Pakistan) was launched in New Delhi in 1993 at the Education for All (EFA) Summit of Nine High-Population Countries. E-9 initiative is aimed at exchanging of good practices and technical expertise, and promoting on of SSC. Themes of Ministerial Meetings have covered the use of ICTs

²¹ UNDP-SU/SSC (2005) UNDP/Japan Partnership

²² UNDP-SU/SSC (2005) UNDP/Japan Partnership

²³ Njinku (2008).

²⁴ source: tcdc1.undp.org.

in education, early childhood care and education, collective and bilateral cooperation in education among others.²⁵

- Colombo Plan: Set up in 1951 in Colombo with 7 Commonwealth Member States it now includes 26 countries including ASEAN and SAARC countries. Among its members Australia, Japan, New Zealand, USA are DAC members, others are developing countries. It conducts a number of training programmes for officials of developing countries in Malaysia, Thailand, and Philippines. Between 1951 and 1991, 300,000 persons had been trained under the Colombo Plan course. Subsequently it has trained 13000 persons.²⁶
- Commonwealth Fund for Technical Cooperation (CFTC): Set up in 1971, CFTC provides assistance to developing Commonwealth countries for building knowledge and institutional capacity needed to address their development priorities. For instance, CFTC in collaboration with the Government of India hosted six pan-Commonwealth institutional capacity-building programmes to enhance competitiveness of SMEs recently. In 2007, jointly with Confederation of Indian Industry, CFTC organized the Commonwealth Connects: e-Partnership Summit bringing together ICT Ministers of Commonwealth countries to discuss ways and means of addressing the digital divide. CFTC is funded by voluntary contributions which totaled 24 million British pounds in 2007. Major contributors include Australia, Canada, India, New Zealand, Nigeria, Singapore, South Africa, and the UK.²⁷
- International Trade Centre, Geneva: Jointly set up by the UNCTAD and WTO, ITC provides technical assistance to developing countries for enterprise development and trade promotion. The Consolidated Programme Document (2008/9) Strategy for Asia and the Pacific seeks to enable enterprises to convert commercial opportunities into actual business. To this end, planned activities include expansion of South-South trade cooperation including development of regional hubs in China, India and Singapore, the sustainability of Asia Health Care Initiative with the pharmaceutical sector, triangular cooperation initiatives supported by North and exchange of experiences with developing sub-regions including Africa, and new initiatives to increase participation of Asia especially LDCs in development aid procurement.²⁸
- Asia Pacific Centre for Transfer of Technology: UN-ESCAP has set up this centre in New Delhi for promoting SSC in technology. The core funding for the Centre is provided by the host government and programme funding by UNDP and bilateral donors.
- World Bank's South-South Experience Sharing Programme: As the first event in this programme, Bank's South Asia and Africa Region jointly coordinated a dairy sector study tour in Anand, Gujarat in India. Over three days, 12 public and private sector participants from Ethiopia, Tanzania, and Uganda visited Anand home to Gujarat Cooperative Milk Marketing Federation and the National Dairy Development Board, which consists of 2.7 million farmers to learn about the Indian experiences in cooperative dairy development that has provided means of improving livelihood for poor farmers.²⁹
- NAM Centre for Science and Technology: This Centre has been set up in New Delhi

²⁵ UNESCO (2006).

²⁶ Source: www.colombo-plan.org

²⁷ Commonwealth Secretariat (2007).

²⁸ Source: www.intracen.org.

²⁹ World Bank (2008).

with the support of the Indian Government and contributions of member governments. It works on capacity building and SSC in science and technology.

- UNIDO Centre for South-South Industrial Cooperation, New Delhi: UNIDO's first SSC Centre was inaugurated in New Delhi February 2007. It seeks to enhance greater interaction between developing countries by exchanging expertise and experience, networking institutions and enterprises, replicate best practices to reduce poverty, strengthen national and local innovation systems.³⁰ UNIDO is also planning a similar centre in China.

5. Significance and Impact of TDC and SSC

The above review highlights that the scale, scope and coverage of TDC and SSC has expanded a great deal over the past decades. Particularly in respect of capacity building a great deal seems to be happening. Yet a proper examination of the relative significance and impact of the phenomenon of TDC and SSC is prevented from the lack of an internationally agreed definition of SSC, the absence of coordination at national levels between different agencies involved in SSC, and the lack of comprehensive statistics collection at the national and international levels. This situation is clearly unsatisfactory as one is left in the dark about the role played by TDC and SSC in international development and achievement of MDGs. The creation of Development Cooperation Forum should contribute to address these gaps by evolving guidelines for reporting on SSC and TDC related activities.

In the absence of quantitative statistics of comparable nature, it may be desirable to examine the scale of TDC and SSC initiatives in a particular sector of importance. In that respect information and communication technologies (ICTs) products and services has emerged as an area of critical importance. These technologies find applications in a wide range of sectors and create opportunities for countries to enhance efficiency and productivity of their productive processes. Access to these technologies empowers a country to exploit the opportunities created by globalization while a lack of capabilities may marginalize a country in the global division of labour. Therefore, digital divide among countries and within a country of the region, a term used to refer to the gaps between the access and capabilities with respect to ICTs deployment could have important bearing on the macroeconomic performance of a country. Besides deployment of ICTs in their development, a number of countries have been able to exploit opportunities for their export. ICTs also enable export of a number of other services, for instance, accounting, medical transcription and other business process outsourcing that can now be delivered through internet online.

Exports of ICT been growing rapidly at an annual rate of 11 per cent compared to 8 per cent for all services during 2000-05. In 2005 ICT enabled services represented about 50 per cent of total services exports thereby creating new export opportunities. The top 10 exporters of ICT enabled services until 2004 were all developed countries. In 2005, India became the first developing country among top 10 exporters with exports of US\$ 41 billion sustaining a 37 per cent annual growth of exports during 2000-05. China is catching up quickly and is among the top 20 exporters with export value of US\$ 26 billion in 2005.³¹ Other countries that have also developed capabilities in ICT services and their exports are Brazil, Philippines, Mexico, Costa Rica, Indonesia, Vietnam, South Africa and Singapore. Expansion of ICT services industry in India and China among other countries has not only contributed to their robust growth but also

³⁰ Source: www.unido.org/index.php?id=950.

³¹ UNCTAD (2008)

to South-South trade and investments. They are now seeking to share some of their accumulated skills and expertise to co-developing countries as a part of SSC. Annex 1 presents a select list of the agreements between India and co-developing countries for ICT cooperation.

A recent UNU-IIST study has analyzed the trends and patterns in TDC and SSC in the ICT sector.³² Box 3 summarizes the picture emerging from this study. What comes out is that a considerable amount of SSC activity and TDC has begun to take place in the ICT services especially if recent initiatives such as pan-Africa e-network are also included. India and China are among the most active countries in the SSC in ICT services and the main area of cooperation is capacity building.

Box 3: Bridging Digital Divide: Triangular and South-South Cooperation in ICTs

The South-South Cooperation in Software Technology (SSC-ST) provides a platform for all countries of the South to develop their software technology capacity, and strategically apply acquired knowledge and capacity to address pressing developmental problems, e.g. related to education, health and environment. Through SSC-ST, countries can also leverage existing opportunities in generating income through the export of professional software labour, software services and software products. The increased availability of Free/Libre/Open Source Software (FLOSS) and its community presents an ample relief to developing countries in the acquisition and usage of software products, considering the increasingly stringent Intellectual Property Rights (IPR) regimes. FLOSS also provides opportunities to these countries to innovate, by developing solutions to address their peculiar problems and sharing these solutions freely. A summary of findings is as follows:

1) *There is a significant growth in SSC-ST since 2003:* A significant number of South-South programmes in software technology have been initiated under bilateral, multilateral, regional and sub-regional frameworks in the areas of: training, technology transfer, trade, experience-sharing and Open Source software adoption. UN organizations such as UNCTAD, UNEP, UNDP and UNU-IIST have also been actively working with countries and regional organizations particularly in the area of capacity development, implementation of specialized applications, Open Source adoption, and policy development. Japan has also signed a number of cooperation agreements with China, Korea, Cambodia, Philippines, Vietnam, India and Singapore to provide technical support to building e-applications. There is a noticeable growth in cooperation agreements between countries after 2003.

2) *Traditional SSC pivotal countries are also involved in SSC-ST initiatives:* A few national-level, broad-based Technical Cooperation among Developing Countries (TCDC) initiatives by India, China and Nigeria contribute to strengthening software technology capacities of the countries in the South. These contributions range from commitment of funds to TCDC cooperation, deployment of volunteer experts to beneficiary countries, for instance experts to teach Software Technology in local Universities, and provision of training programmes.

3) *Several bilateral agreements on SSC-ST have been signed since 2003:* There are several bilateral cooperation frameworks, but essentially pivoted by India and Japan (a non-Southern state). Between the mid-1990 and 2003, India signed bilateral agreements with Sri Lanka, Senegal, Vietnam and Mauritius in the areas including e-government, computerization of government offices, and FDI in software industry. Various memoranda of understanding and agreements have been signed by India with over 30 countries in the area of software technology and e-applications. Under the framework of economic partnership agreements, Japan is cooperating with Singapore in the area of human resource development and e-government. Japan is also offering technical support to Vietnam, Philippines and Cambodia in the development and implementation of e-government and e-learning projects.

4) *A few trilateral agreements on SSC-ST are operational:* Three trilateral cooperation frameworks in software technology in the area of service trade, Open Source software and Electronic Governance are documented. The first being the India-Mexico-Venezuela cooperation (1981-1984) under the INTERACT Project to implement some advanced information systems for developing countries. Japan-China-Korea cooperation (2002-now) is a broad-based Science and Technology cooperation covering Software Technology in the areas of Open Source and standardization of technologies. The third is the India-Brazil-South Africa economic cooperation, again a broad-based framework covering Software Technology in various areas – from trade in services to experience-sharing in e-Governance.

5) *NGO-facilitated inter-governmental SSC-ST initiatives are operational:* Four inter-governmental cooperation frameworks facilitated by NGOs in advanced information systems (agriculture, speech processing, aid management and e-learning) and human capacity development, are documented. The Development Gateway in collaboration with the Indian Government

³² see Ozo et al (2007).

developed an ICT Research and Training Center at the Centre for Advanced Computing in Bangalore. The Centre commenced operations in 2003 and has been carrying out various advanced software technology projects - Internet and Speech Technologies, Office Application Suite in Indian Languages, etc. - since then. The Consultative Group on International Agriculture Research (CGIAR) is providing technical assistance and facilitating the development of Information Technologies for sustainable agriculture in developing countries under the Agrivista Project. The Carnegie Science and Technology programme has embarked upon several projects in the area of information systems, database and directory service development in developing countries.

6) *Regional and sub-regional SSC-ST initiatives are growing in Asia:* There are at least two sub-regional initiatives from Asia-Pacific and West-Asia subregions. Regional Centers for technology transfer were setup by the UN Regional Economic Commissions and host governments – an example is the Asian and Pacific Center for the Transfer of Technology (APCTT) in India. Funding for these Centers is provided by the host countries in the region. These centers have been successfully used for SSC in technology (e.g. SSC-ST) at the regional level. The West-Asia region entered into a comprehensive cooperation agreement which covers Software Technology related initiatives from capacity development and Open Source software to building Centers of Excellence in Software Technology. These initiatives are to be implemented between 2005 and 2010.

7) *Increasingly, several SSC-ST initiatives have been facilitated by UN organizations:* In addition to the support provided through regional initiatives, many UN organizations like UNDP, UNCTAD, UNDESA, UNEP, UNESCAP and UNU-IIST are directly providing technical assistance and capacity development support to different countries. Support is typically in the area of applications of software technology for development. Other international organizations and institutions notably the World Bank and the Third World Academy of Science are also supporting SSC-ST initiatives. Since 1992, the United Nations University – International Institute for Software Technology (UNU-IIST) has been providing the following types of support to developing countries in the area of Computer Science and Software Engineering in particular: (i) fellowships to graduate students and young lecturers from developing countries; (ii) development of curricula in Computer Science; (iii) organization of schools, courses and conferences; (iv) promotion of Open Source adoption; and (v) development of Electronic Governance.

8) *Most SSC-ST initiatives relate to applications and technology transfer:* Most of the existing SSCST initiatives relate to the transfer of technology in general application areas particularly e-government and other e-applications such as e-health and e-learning. Other applications domains include health, agriculture, environment, transportation and customs services.

9) *Cooperation initiatives on Open Source Software feature prominently:* Several SSC-ST initiatives in the area of capacity development and use of Open Source software in the development of e-applications such as e-government, e-health and e-learning, feature prominently within regional and multilateral arrangements.

10) *Inter-regional SSC-ST initiatives are limited:* Few inter-regional SSC-ST initiatives were documented. The India-Brazil-South (IBSA) cooperation provides a foundation for future interregional cooperation between Asia, Africa and Latin America.

Key Examples of Bilateral, Multilateral and Triangular Cooperation

1) As at 2006, India has signed Memoranda of Understanding, Agreements, Protocols and Programmes of Cooperation with 33 countries in Software Technology, Telecommunication Software, e-Governance and e-Applications in general. In particular, India through its Technical and Economic Commission assisted in the computerization of the Senegalese Government offices.

2) Between 1981 and 1984, India championed the INTERACT Project to assist other developing countries in applying small and mini-computer systems in three main areas: (i) electric power systems management; (ii) passenger reservation system on railways; and (iii) advanced weather forecasting using ground-based, air-borne and satellite-based systems. This initiative involved the participation of computer scientists from Venezuela, Mexico, Yugoslavia and Indonesia. The Computer Maintenance and Services Corporation of the Department of Electronics, Government of India was mainly responsible for the design of the system. The Indonesian BPPT company participated in the weather project, while the researchers from Venezuela, Mexico and Yugoslavia were engaged in research and development activities for the electrical and railway systems. There were two distinctive features of the project: (i) developing tailor-made solutions suited to developing country conditions and (ii) free exchange and utilization (including commercialization) of the created intellectual properties by the cooperation members.

3) India and Sri Lanka have signed a number of cooperation agreements in the areas of e-Government, investment and trade in software products and services, and infrastructure development since 2003. These agreements cover two main areas: (i) capacity building, training and technical assistance in e-Governance and (ii) investments in joint-venture and fully owned subsidiaries in Sri Lanka by Indian software companies. India also intends to: (i) provide technical and financial assistance to Sri Lanka in software development, spatial data acquisition and storage, and analysis in the area of marine resource management, and (ii) build redundant and backup facilities for its software development and business process outsourcing industries in Sri Lanka.

4) India provided technical support to the Cyber City Project (at Ebene) of the Mauritius Government in 2004. The Software Technology Parks of India and the Business Parks of Mauritius Limited were involved in the implementation of the project.

5) The Government of Vietnam is being supported by the Government of India in the development of human resources for software industry in Vietnam. Specialized software technology training programs for Vietnamese candidates were proposed in

several areas including: design and development of databases, portal programming, Open Source application development, and Object-Oriented analysis and design.

6) The Government of India is also involved in a bilateral cooperation agreement with the Government of Laos to develop: (i) a plan of action for e-Governance development, (ii) national portal for the Laos Government and (iii) an IT Training Centre at Vientiane. This cooperation has produced an e-Governance action plan after an assessment survey carried out by a team of experts about the ministries, departments, provinces, and executive and judiciary systems in Laos. A national portal for the Government of Laos is currently operational including dynamic websites for the ministries and departments of the Government.

7) In 1997, a Memorandum of Understanding in software development and services was signed between Visual Soft India Limited and Bumi Komputer (KBK) Malaysia to develop joint-venture centers in Hyderabad and Malaysia. Under the arrangement, KBK received research and development support, and supply of network software needed in the Malaysian market. Visualsoft, in turn, received new capacity and the opportunity to establish and upgrade its presence in the South-East Asia.

8) Under the India-Brazil-South Africa (IBSA) Economic Cooperation, operational since 2003, these three countries agreed to: (i) facilitate trade among them in computer software products and services, (ii) share experience and expertise in the field of e-Governance and (iii) strengthen capabilities in free and Open Source software. This particular cooperation is important as it may drive a more broad-based inter-regional cooperation between Africa, Latin America and Asia.

9) The Government of India, under the 1989–1998 cooperation agreement, assisted the Government of Nigeria in the development of Information Systems to support the management of Nigerian railways. This support was provided by India through the Ministry of Railway of the Government of India through RITES - Railway Industrial Technical Engineering Services.

10) The Japan-China-Korea Cooperation is a broad-based cooperation covering Software Technology in the following areas: (i) implementation of a human capacity development programme for ASEAN countries; (ii) strengthening information-sharing scheme concerning information network security issues such as countermeasures against spam; (iii) implementation of a pilot project concerning the Radio Frequency Identification (RFID) tag sensor network; and (iv) promotion of cooperation on standardization of technologies for the fourth generation mobile telephony.

11) Triangular Cooperation: *Japan* is assisting Vietnam and Philippines in the areas of e-Government development and e-Learning respectively. Japan is also providing support in the area of public applications (such as e-Governance) to Cambodia. In addition, Japan is cooperating with India through the Japan-India ministerial meeting in the areas including e-Government and ICT policy. Under the Japan-Singapore Economic Partnership Agreement, January 2002, Japan agrees to support Singapore in the area of Human Resource Development in ICT and e-Government. This cooperation has been initiated through the adoption of a joint statement and cooperation agreements. Japan, through its International Cooperation Agency (JICA) has continued to support several developing countries in the area of capacity development, particularly in multimedia technologies and e-learning. The Japan Center of International Cooperation for Computerization (CICC) has been particularly active in Asia in capacity development and transfer and sharing of best practices. CICC has also been strongly promoting the use of Open Source software.

The Republic of *Korea*, through various agencies such as Korea International Cooperation Agency (KOICA), Korea Agency for Digital Opportunity and Promotion (KADO) and Korea Ministry of Information and Communication (MIC) is emerging as a strong supporter of development in the South, especially in the area of software technology applications. The Korean Government provides a wide range of technical assistance to developing countries particularly in Asia. The range of SSC-ST initiatives supported by these agencies include: e-Government master plan design and implementation, capacity development, e-Learning, computerization of government offices, and Software Technology human resource development. The Korean Government through its Export-Import Bank also offers soft loans to the countries under its Economic Development Cooperation Fund (EDCF). Scholarships for studying in Korea are also provided to students from developing countries in the areas including software technology and applications.

Annex 2 lists more examples.

Concluding Remarks

1) In terms of national initiatives to promote SSC-ST, India remains most active. India has continued to provide technical assistance to several developing countries since 1981 to date in the areas from development and implementation of information systems (technology transfer), to providing financial assistance and investment to software industries of other countries. India is also offering scholarships and training schemes to students from other developing countries.

2) China has also supported several developing countries through its technology cooperation programme. Chinese support is largely in training. China is also enjoying a large number of technical cooperation agreements including SSC-ST with major players in the North, particularly the European Union and the US. Over 130 cooperation agreements involving the Chinese government have been signed.

3) In general, capacity development through training and scholarship programmes is the most common form of assistance offered by these two countries.

Source: Adegboyega Ojo, Rilwan Basanya, Tomasz Janowski and Mike Reed (2007) *South-South Cooperation in Software Technology*, UNU/IIST Report # 371, Macau: UNU/IIST.

6. Concluding Remarks and Policy Lessons for Strengthening Triangular and South-South Cooperation

It is clear that SSC and TDC in Asia-Pacific have grown in importance over the past decades with the rising complementarities and emergence of growth poles in the region and due to attention paid by the governments to regional economic cooperation. Asian emerging countries have been cooperating with their partner countries within and outside the region primarily through sharing of development experiences, cooperation projects, capacity building, technical assistance, but increasingly also including subsidized lines of credit and grants, preferential market access on unilateral and reciprocal basis. These aspects of cooperation are also complemented by technology transfers and investments by enterprises based in emerging countries that have become important sources of inflows of FDI in low income countries and LDCs in the region. However, the exact scale of SSC and TDC in Asia-Pacific and effectiveness is difficult to be ascertained due to lack of coordination between agencies of the cooperating countries and absence of information compiled at one place of multifaceted programmes of cooperation. Generally different agencies in cooperating country's governments cooperate with their counterparts in the recipient countries sharing development experiences but such information is not compiled at one place. Furthermore, even with the coordination, the scale of SSC is likely to be underestimated considerably because of not accounting all the costs associated with the projects and also lower costs of expertise and living in developing countries. It is extremely important that action is taken at the national and international levels to evolve appropriate guidelines and procedures for fully accounting the true scale of the SSC and TDC and enhance their effectiveness.

Notwithstanding the lack of precise information of internationally comparable nature, it is quite evident from the foregoing review that SSC and TDC have come of age in Asia-Pacific region. China India, Korea and Turkey have evolved very extensive and comprehensive portfolio of development cooperation programmes in terms of geographical and sectoral coverage and scale. Thailand, Singapore and Malaysia also evolved significant development cooperation programmes focusing on capacity building. The general focus of the SSC programmes of Asia-Pacific developing countries is on capacity-building, and sharing their development experience in the form of experts and assisting the partners through deputation of experts and in building infrastructure and productive capacities and providing market access. Triangular development cooperation has also become a sizeable activity in the Asia-Pacific region in view of the pioneering role played by Japan and some international agencies. Singapore, Thailand, Malaysia, and the Philippines are particularly active in partnering with traditional donor countries for SSC programmes. The focus of TDC programmes is largely on capacity building. Asian countries have also developed extensive cooperation with international agencies and are cooperating with them in promoting SSC. Even though SSC programmes are generally regional, African countries are also receiving considerable attention. The in Asian countries' development cooperation programmes. ICT sector is an area where major Asian emerging countries have built substantial capacity and are sharing it with other countries. All the different activities happening in the sector in the area of capacity and infrastructure building add up to quite a lot. The ICT case study suggests that SSC and TDC have the potential of contributing to international development cooperation in a substantial manner.

Even though a substantial effort is being made by developing countries in development cooperation, its full potential is far from realized. Here, we highlight imperatives to better

exploit SSC AND TDC opportunities in the current context of global slow down and financial crisis in the US. Then we make some recommendations for improving the monitoring and effectiveness of TDC and SSC

6.1. Imperative of Enhancing SSC and TDC in Asia-Pacific

The external economic environment has considerably deteriorated over the past year with the US economy going into recession and the global economy slowing down. Led by robust growth in China and India, Asian economies have so far managed to avoid a threat of serious recession. However, the downside risks are serious and a specter of stagflation is looming large. Steps need to be taken for ensuring a long-term sustainability of growth in different parts of the world especially in the developing Asia and Africa to address the poverty starvation and exclusion. In this context Asia as the emerging centre of gravity of the world economy with rapidly growing economies of China and India has a role to play. Regional economic and financial cooperation and integration in Asia can play an important role in recovery of the world economy from the slow down.

a) Promotion of South-South Trade and Investments

A new vigorous thrust is needed to push SS trade and investments.³³ The strategy could include broadening and deepening the ongoing third round of the Global System of Trade Preferences among developing countries (GSTP) negotiations besides market access to LDCs. The GSTP negotiations could adopt a negative list approach where developing countries would offer concession to other developing countries on an across-the-board basis except for a small exclusion list of sensitive products. Also since the agriculture sector in most developing countries sustains the livelihood of the bulk of the population, liberalization of agricultural trade could be on a different track. The GSTP could also provide a framework for linking different RTAs of developing countries and exchanging trade concessions to each on a reciprocal basis. MERCOSUR has already joined the third round of GSTP as a party. Other regional groupings of the South could participate in the process and create a framework for exchange of trade preferences thereby creating a Southern Economic Space. The service sector has emerged as the most dynamic sector in a number of Southern economies. South is also an active and emerging player in trade in services. SS trade in services could also assist them in bridging the capability and skills gap in some areas. Hence, an approach towards liberalization of trade in services between developing countries would be mutually fruitful. Therefore, the revitalized GSTP could be expanded to cover trade in services on a positive list basis. To exploit the full potential of GSTP, mutual cooperation would be desirable in trade facilitation and addressing various non-tariff barriers. First of all there is need for improving flows of trade and business information between developing countries. A web-based information clearing-house could be set up exclusively for developing countries based exporters and importers. Secondly, there could be cooperation between standards and export inspection bodies of developing countries for evolving mutual recognition agreements (MRAs), and aligning their conformity assessment and customs procedures especially for products of mutual trade interest.

There is need for strengthening commercial banking links to facilitate the intra-South trade. Commercial banks of the South or their consortia could strengthen their presence in other developing countries. Similarly, export import banks or export financing agencies of developing countries could get together and develop reciprocal links for export financing.

³³ See RIS (2007b).

Cooperation between clearing and payment agencies of developing countries may also be fruitful in adopting a framework for conducting mutual trade in local currencies. For promoting mutual investment flows, developing countries could evolve a *South Investment Treaty* providing post-establishment national treatment, MFN and investment protection and dispute settlement. This global arrangement will avoid the need of signing thousands of BIPAs that developing countries are signing between themselves. By limiting the national treatment to post-establishment, the treaty will not reduce the policy space that developing countries might need to protect domestic enterprises. In order to make the treaty a balanced one it could build certain principles of corporate ethics and investor behaviour that the developing country investors will be expected to follow. Developing countries may also consider adopting a global South Double Taxation Avoidance Treaty (DTAA) to facilitate intra-South FDI flows. The potential of SS investments may not be exploited fully for want because of the lack of information on business opportunities and investment climate in different developing countries. Unlike western MNEs, southern enterprises are generally small enterprises having operations in a few countries and are not equipped with captive information networks to track opportunities globally. This information gap is to be bridged by creating more opportunities for South business and industry to interact regularly within the framework of an apex body. Here the G-77 Chamber of Commerce and Industry set up recently, should play an effective role by organizing South trade fairs and interaction meetings regularly besides web based information portals on opportunities for SS trade and investments.

Finally, a new financial institution such as the South Bank could be set up by developing countries by pooling a small part of their foreign exchange reserves to promote South-South trade and investments on an exclusive basis. It could have a window reserved for supporting SS investments by providing term lending and venture capital support to these ventures. The Multilateral Investment Guarantee Agency (MIGA) of the World Bank could be asked to create a special window for covering intra-South FDI for non-commercial risks. For making it effective, more developing countries should join MIGA.

b) Broadening and Deepening Regional Economic Integration in Asia

With the emergence of the middle class, the emerging countries in Asia are becoming important markets for an increasing number of goods and services. In products such as automobiles vehicles, jet planes or telecommunication products and services already the largest markets in the world are already in China and India. Global companies from anywhere are giving due importance to these countries in their global corporate strategies designed to leverage their growth. Regional economic integration as a development strategy has a profound logic but emerges as a far more viable trade and development strategy that can facilitate spreading the dynamism of region's growth poles across the region, help narrow the development gaps and bring about convergence in levels of development.

In that context, the RIS proposal of an Asian Economic Community bringing together all major sub-regions of the continent following a building bloc approach assumes importance.³⁴ India has officially articulated this proposal with Prime Minister Dr Manmohan Singh terming an Asian Economic Community as an 'arc of advantage, peace and shared prosperity'.³⁵ India has also taken it at different regional forums as well as in Summit Meetings with major Asian countries such as Japan.³⁶ The launch of the East Asia Summit in December 2005 in Kuala Lumpur as a result of the ASEAN dialogue partnership process bringing together leaders of 10

³⁴ See RIS (2008)

³⁵ see Prime Minister's inaugural address at the ASEAN-India Business Summit, October 2004.

³⁶ See Joint Statement of India-Japan Summit, New Delhi, April 2005.

ASEAN countries and their six dialogue partners viz. Japan, China, India, Republic of Korea, Australia and New Zealand (ASEAN+6) has provided a forum for dialogue on the broader regional architecture. At the Second EAS held in Cebu, the Philippines, it was agreed to launch a track-II study on the feasibility of a comprehensive economic partnership of East Asia (CEPEA) covering all the 16 EAS member countries. Studies show that EAS based economic integration has potential generating billions of dollars of additional welfare gains for the region and expediting the process of development of the region.³⁷

c) Asian Financial Cooperation for Infrastructure Development

The current financial crisis in the US and the associated risks to the global slowdown has created a new urgency for strengthening regional financial co-operation. While calling for greater activism of global financial institutions for managing the global risks, Asia must explore opportunities of contributing to global recovery. The huge foreign exchange reserves of Asia (defined to include East Asia, South Asia, and Middle East) now present an opportunity for activism. These reserves are now over US\$ 4 trillion and growing at nearly ten percent per year and they can be creatively utilized to address the problems of the global economy.

RIS in collaboration with UN-ESCAP organized a High-level Policy Dialogue in March 2007 which discussed a new regional financial mechanism or a special purpose vehicle in Asia, tentatively called the Reserve Bank of Asia (RBA), with authorized capital of, say, \$300 billion, 10 per cent of which may be paid up. A certain small percentage (say 10 %) of the regional reserves (currently about \$3 trillion and increasing at more than 10% per year) may be lent by the central banks of Asia to at the rate that obtains on 30-year US Treasury Bills to RBA which will be authorized to invest these resources in global and regional equity indices. Backed by the reserves, the RBA could also issue an Asian Currency Unit (ACU) as a parallel reserve currency.³⁸ Its initial focus of RBA could be to correct the infrastructure deficits in a public-private partnership mode by filling the financial viability gap that the private sector may have in meeting the infrastructure (both physical and social) needs. In addition, the RBA will be authorized to borrow from the markets and lend on projects under Public-Private Partnership (PPP) mode at rates and maturity patterns determined by a process of competitive bidding on the projects identified by RBA. With private and public sector enterprises utilizing the capital markets for raising their basic fund requirements, the financial ability of RBA should enable it to catalyze for more than \$100 billion infrastructure investment per year in the region, thus meeting about half of the infrastructure funding gap.

The proposed mechanism should help in recovery from the current US financial crisis as follows. First, it will help in recapitalization of distressed financial institutions in the US and EU, through injecting funds on market-oriented terms. Second, ACU will become an alternative currency of international transactions and provide a mechanism for depreciation of USD and Euro and a concerted appreciation of the Asian currencies. Third, it will provide a mechanism for facilitating increase in net exports from the US and create alternative sources of demand in Asia (initially through infrastructure investments) to substitute for loss of Asian exports to the US. Finally, it will contribute to funding of regional and global public goods including adaptation and mitigation expenditures related to climate change.

Therefore, the regional mechanism for financial cooperation could be an important initiative for addressing the ongoing financial crisis in the world economy and building a more sustainable basis for the long-term growth in Asia and beyond. A beginning for such an initiative could be

³⁷ See for a review of the studies Kumar (2007)

³⁸ See RIS (2007a); also see RIS (2008).

made within the framework of the East Asia Summit (EAS). At its second session held in Cebu in January 2007, the EAS leaders decided to explore opportunities for financial cooperation. Once launched within the EAS framework, the initiative could be extended to other Asian countries. An alternative regional forum could be the Asian Cooperation Dialogue (ACD) which has adopted a functional approach to regional cooperation and in which most of the Asian countries participate.

d) *Mobilizing ICTs for Empowering the Poor and for Development:* Notwithstanding the concern about the digital divide which prevents developing countries from exploiting the fruits of information and communication technologies (ICTs) for their development, many promising experiences of their pro-poor deployment from across the world have been documented. For instance, use of ICT by rural communities facilitated by community owned computers with visual or graphic interface, use of public fixed line and mobile telephone bureaus in India and Bangladesh as sources of rural employment as well as for increasing the virtual teledensity, use of mobile phones by fisherfolks, use of internet for e-governance such as computerization of land records, among many other applications. Developing countries can formulate strategies for promoting cooperation in the area of ICTs for exploiting their potential for the development of member states. In particular, South-South Cooperation could cover not only capacity building but also the joint development of hardware and software for IT diffusion especially in view of high cost of equipment and lack of software in local languages. Developing countries could pool resources to develop low cost computers and other equipment. They could also pool resources for joint development of local language software exploiting the opportunities thrown up by the availability of open source platforms like LINUX. Finally there is need of learning from each other by documenting and sharing experiences in innovative applications in different parts of developing world.³⁹

f) *Exploiting the Potential of Biotechnologies for Pro-poor Growth:* Biotechnologies can assist developing countries in achieving food security and rural development by breaking the yield barriers, by helping development of plant varieties tolerant to salinity and alkalinity, and development of low-input agriculture that is of special significance for developing countries with large populations of small and marginal farmers among other ways. They can also help in fostering rural industrialization by integrating agriculture with production of food, animal feeds, energy, fertilizer, and a number of industrial products. A number of encouraging experiences from countries like Brazil, China and India with these food-energy integrated systems are now available and could be replicated to other countries. South-South cooperation in this area could also cover education and training, joint R&D, exchange of experiences and technologies, cooperation in biodiversity conservation, protection and evolution of biosafety norms.

g) *Cooperation in Medicines and Public Health:* Development of more effective remedies and vaccines for dealing with common and pressing diseases of developing countries continues to be neglected by the global pharma industry despite the strengthening of international IPRs regime under the WTO's Agreement on TRIPs. These include tropical diseases like malaria, TB, HIV-AIDS, among others that affect millions of people in the South. R&D institutions in developing countries need to network and organize themselves to undertake R&D on such diseases following a consortia approach. It has been estimated that research on dealing with these diseases would require an additional funding of US\$ 3 billion per annum. WHO is

³⁹ See RIS (2006) for more details.

seeking an allocation of additional resources of this magnitude from developed countries. In order to build capacities for R&D in developing countries, it would be advisable that these resources are passed on to eligible institutions and enterprises in developing countries for R&D relevant for their needs.

h) Cooperation for Building a Development Friendly World Trading System: In the Doha Round of WTO negotiations, developing countries have strengthened their participation in international trade talks through issue based coalitions such as the G-20, NAMA-11, and G-33 as well as the G-90. The success of these coalitions was evident in their ability to get three (investment, competition policy, and government procurement) of the four Singapore issues dropped off the negotiating agenda of the Doha Round. It can be argued that a more proactive SSC would be crucial in making the world trading system more responsive to the needs of the developing countries, especially the least developed countries. Hence, their coalitions could now beyond only reacting to the proposals brought on the table by developed countries. They could begin to set the agenda.

6.2. Enhancing the Effectiveness of TDC and SSC: Some Action Points for different stakeholders

It is evident that a substantial SSC and TDC activity is taking place in Asia-Pacific region and also reaching out to Africa, but because of the lack of institutional infrastructures and coordination mechanisms at the national and international levels, their precise magnitude in international development cooperation remains difficult to assess. Hence, an intervention is needed by different stakeholders the visibility of the development cooperation effort put in by Asian developing countries. Some recommendations in that overall context are as follows:

a) Action Points for Governments of Cooperating Countries

The cooperating country governments should consider creating agencies coordinating SSC related activities. These agencies should develop guidelines to be followed by different government and non-governmental agencies with respect to data reporting to the coordinating agency. Some countries in Asia-Pacific have created such agencies e.g. Thailand International Cooperation Agency (TICA), Malaysia Technical Cooperation Programme (MTCP) under the Economic Planning Unit, Singapore Technical Cooperation (STP), the Republic of Korea: Korea Overseas International Cooperation Agency (KOICA). In China, the Ministry of Commerce coordinates most of the development cooperation activities. India has announced the formation of the India International Development Cooperation Agency (IIDCA). The development coordination agencies of developing countries should also gather information from academic institutions, business enterprises and NGOs based in the country on their activities in other developing countries especially those pertaining to creating productive capacities, human resource development, transfer of technology, scientific and R&D collaborations, technology licensing agreements, trade in high technology goods and services. They should also compile information on SSC activities assisted by traditional donors or multilateral or regional agencies in a triangular manner.

b) Action Points for DAC Countries for Triangular Development Cooperation

Considering the availability of more appropriate and cost effective skills and expertise in developing countries, it is imperative that DAC donor countries route a growing proportion of their development assistance through SSC. It is proposed that DAC countries target to route at least 10 per cent of their development assistance through SSC. In view of lower costs of delivering assistance in developing countries, the effectiveness of development assistance routed through SSC would be several times higher. It will also be more appropriate for the

recipient countries and may have other positive externalities for developing countries. As a pioneer of TDC, Japan may take a lead in announcing a target for promoting SSC. Furthermore, DAC countries should come forward to support ongoing SSC projects to help expand their scale besides formulating new projects for TDC.

c) Action Points for DCF and UN Regional Commissions:

In order to facilitate inter-country comparability of development cooperation statistics compiled by national government agencies, it is very important that internationally accepted definitions of development cooperation and guidelines are developed. The Development Cooperation Forum and/or ESCAP may consider developing such norms guidelines for collection of statistics directly from national development cooperation agencies. As SSC and TDC are unique activities having very high opportunity costs for cooperating countries given their own levels of development, these guidelines should be entirely re designed rather than adopting the DAC guidelines. The definitions and guidelines should also include not only “official” development cooperation, technology transfer and productive capacity building projects run by government agencies and civil society organizations, preferential market access provided by developing countries to LDCs, among other aspects of cooperation. Furthermore, given the significant differences between the cost of living and cost of expertise between developed and developing countries, the DCF should consider, as appropriate, developing some conversion factors (such as ppp factor for GDPs) for different cooperating country for converting total cost of activities undertaken by a country in internationally comparable prices to facilitate an understanding the true scale of SSC and TDC.

The DCF could consider, as appropriate, promoting regional coordinating bureaus in UN’s regional commissions (e.g. Asia-Pacific DCF at ESCAP) to sustain this initial effort. These regional coordinating bureaus could develop links with national development cooperation agencies in different cooperating countries to administer, on a voluntary basis, the DCF data compilation guidelines and collate data in an internationally comparable format for dissemination. The DCF could then pull it together to have a fuller picture of SSC and TDC in different parts of the world and its role in development and the achievement of MDGs. The DCF and its regional bureaus could also provide technical support to governments of contributing countries to implement the guidelines and enhance coordination between different agencies involved in SSC.

DCF could also compile a directory of best practices in SSC and TDC. In particular, any projects assisting developing countries in building productive capacities e.g. industrial projects that assist the LDCs in enhancing value addition on their natural resources and move up the value chains and generating local linkages and those developing human resources should be highlighted. The objective of SS development cooperation is to empower recipient countries with necessary skills so that they can come out of the dependency syndrome. In that context, the offers of market access by Southern countries to LDCs should also be highlighted by the DCF in so far as they have the potential to attract investments in building productive capacities.

Finally, the DCF should develop guidelines for reporting of TDC activities from the DAC donors and collect that information for a better assessment of TDC. In case the proposal of setting a target of routing certain proportion of DAC countries’ development assistance through triangular framework is agreed upon, the DCF could also monitor progress in this area.

d) Action Points for International Development Agencies and Development Banks

In order to promote SSC, the international development agencies and international and regional

development banks may give preference to procurement in the South in their development projects. The preferences could be in the form of floating of bids in advance for Southern suppliers and should be reopened globally only after failing to get adequate response from Southern suppliers. The other option is to reserve a certain proportion (say 25-50 per cent) of their procurement from Southern suppliers for delivery in other developing countries. This will prompt these agencies to develop Southern sources of supply and in the process boost SSC and TDC.

e) Action Points for Programme countries

In order to enhance effectiveness of SSC and TDC, it would be desirable if recipient countries also designate a government agency to coordinate with their Southern partners for development cooperation activities, to monitor and evaluate development cooperation projects and provide feedback to Southern partners for improvement in the future. For improving the quality of cooperation they should assume ownership of programmes. Country ownership is among the most important factors for ensuring relevant, efficient and effective development cooperation. Programme (recipient) countries of the region, with the help of Southern donors and traditional donors, may consider establishing voluntarily a country-driven inclusive monitoring and evaluation system to self-evaluate the effectiveness of South-South and triangular development cooperation.

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Annex 1: ICT Cooperation between India and Select Developing countries

Country	Current State of IT Cooperation
Brunei Darussalam	Discussion is in the advanced stage for signing the MoU. A special tailor-made Information Technology training programme in India has been regularly attended by a group of middle level Brunei officials.
Cambodia	As part of Training CLMV officials on IT and networking 45 Cambodian officers are getting trained in India every year.
Columbia	April 2002-An MOU on bilateral cooperation in the field of IT was also signed. The Minister was accompanied by a 10-member business delegation, which held business meetings with their counterparts. An Indo-Colombian Forum on IT and Communications was also organised during the visit and was addressed by our Minister. NASSCOM also entered into a co-operation agreement with its Colombian counterpart FEDESOFIT for providing assistance and information to each other's members.
Egypt	January 2003- A MOU between Productivity and Vocational Training Department of the Ministry and NIIT/ Virgitech was signed, for imparting IT vocational training. NIIT started its operations in 1999 and in association with Virgitech has opened five educational and training centres in Cairo (4) and Alexandria (1). It offers IT solutions in training, system integration and software. NIIT/ Virgitech is working closely with Egyptian Ministry of Industry. NIIT/ Virgitech is also involved with USAID in its IT developmental projects.
Ghana	August 2002-An understanding was reached during its visit to set up an advanced ICT Training Centre in Accra. An agreement was signed relating to the setting up in Accra a Centre of Excellence for Training in Information Technology as Ghana has good potential for the development of the IT. The center is to become operational by mid-2003. Indian computer training giant - NIIT - has opened two training centres in Accra. Suzuki Motors and Tatas have their representative branches in Accra. A Government of India Enterprise - Telecommunications Consultant India Ltd - has been assisting Ghana Telecom in developing telecommunication networks in the country.
Indonesia	MoU has been signed between the Ministry of Science and technology. In the MoU areas of cooperation also included IT. Indian IT firms like NIIT, however, are active in IT training in collaboration with three universities. However, the progress has been slow.
Lao PDR	India extends scholarships and training schemes under the Indian Technical & Economic Cooperation (ITEC) for various disciplines & training programmes. Also 45 Lao PDR candidates get trained in India in the field of IT software and networking. An Indian IT Expert was deputed to Vientiane in June 2003 to examine the possibility of setting up an IT Centre in the Lao PDR. The 4th Joint Commission Meeting was held during 23-24th July 2002 in New Delhi. The Indian side also reiterated its readiness to set up an information technology centre in Vientiane. Discussions are on for setting up DoE Accredited Franchisees in Lao PDR.
Malaysia	MoU signed. Foreign Minister of Malaysia and the Union Commerce and Industry Minister of India in their meeting in 2001 decided to deepen the cooperation in the field of IT and the Indian IT companies were invited by the minister to invest in Malaysia. The Indian private sector giant, Reliance Group, has a tie-up with Maxis Communication of Malaysia, Star Hub of Singapore, and Software Technology Park of India to build a submarine cable linking India with Malaysia and Singapore, connecting to the broadband nationwide fiber optic network. India company, NIIT is active in collaboration with Tu Abdul Razak University.
Mongolia	January 2001- MOU on Co-operation in Information Technology; September 2001-Agreement on Cooperation in Information and Communication Technology. India granted US\$ One Million to Mongolia for the establishment of Atal Bihari Center of Excellence (ABVCE) in Information and Communication Technology (ICT) and to establish five Community Information Centers (CICs) at various district level locations. The ABVCE has i) Videoconferencing facility, (ii) Data Networking Lab, (iii) Software Lab, (iv) JAVA Lab, and (v) Lecture Hall. NIC has also provided the Center with laptops, clients, web Cameras, Firewall and has connected all the facilities to the Internet. October 2002-MOU on Cooperation in the field of Telecommunications
Myanmar	MoU has been recently signed. Detailed discussions for identifying specific areas of cooperation has taken place on January 11, 2004 when the IT Minister of Myanmar visited India in connection with the Asian IT ministers meeting held in India.

Philippines	At the official level progress has been slow but fourth Meeting of India- Philippines Joint Business Council held on May 23-24, 2002 in Manila, recommended IT and Software, among others as areas for cooperation. Indian IT leader Infosys has signed a partnership with Microsoft Philippines and Intel Microelectronics Philippines.
Thailand	The Thailand Government has shown keenness to promote closer co- operation and exchange information pertaining to the Information Technology. The Govt. is interested in setting up of Software Technology Park in Thailand on the lines of STPs in India. They also plan to develop a Cyber City on the lines of one setup in Bangalore. An MOU has been signed between the two countries during the visit of Thai PM to India in November 2001. India-Thai Joint Task Force on IT has also been set up. The understanding on IT with India includes extension of special work permits for Indian IT professionals. A team of experts from India undertook a study on the possible areas of cooperation like sharing India's expertise in STPS, IT manpower development; e-governance and discussions are in progress.
Vietnam	India offered Rs 10 million grant, which has been made use of for setting up of an Advanced Center for Information Technology in Ho Chi Minh City. The Center deals with e learning IT training and distance education. Discussion is on for setting up a Digital library. Indian firms like ApTech and NIIT are active in manpower training individually and jointly with STP like the one in Da Nang. Vietnam's Corporation for Financing and Promoting of Technology (FPT) along with its Indian partner, ApTech, have signed an agreement on training human resources for information technology (IT) at Can Tho University of southern Vietnam

Note: The initiative listed above may not be considered as all-inclusive.

Source: Joseph (2004) and other sources including discussion with leading IT firms in India and officials in different Departments of the Government of India.

Annex 2: Major South-South and Triangular Initiatives in ICT in Asia

	Initiative	Description	Area	Framework	Participant	Year
1.	Computerization of Government offices	Computerization of Senegalese Government Offices	Technology Transfer	Bilateral	India, Senegal	1990
2.	MoU between India and Other Countries in Software Related areas	India has signed memoranda of understanding with over 33 countries	Trade Agreement	Bilateral	India and others	2006
3.	Project INTERACT	Development of a computer-based system tailor-made for developing countries' conditions and needs	Technology transfer	Multilateral	India, Mexico, Venezuela, Mexico, Yugoslavia, Indonesia	1981-84
4.	E-Government Plan	Development of national e-government plan for Government of Laos PDR	Technology Transfer	Bilateral	India-Laos	2006
5.	Cyber City Project	Technical support to the Cyber City Project of the Mauritius Government by India	Technology Transfer	Bilateral	India-Mauritius	2004
6.	India-Sri Lanka E –E-Government Cooperation	India and Sri-Lanka are discussing Capacity building, Training, Technical Assistance, ICT infrastructure and e-government	Financial Assistance and Technology Transfer	Bilateral	India-Sri Lanka	2003
7.	Maritime Resource Management	India is providing Sri-Lanka with technical and financial assistance in software, spatial data acquisition and storage and analysis in the area of maritime resources.	Financial Assistance and Technology Transfer	Bilateral	India-Sri Lanka	2003
8.	Backup Infrastructure	Setting up redundancies and backup facilities in each others country	Experience sharing	Bilateral	India-Sri Lanka	2003
9.	India investment in Sri-Lanka	India firms will undertake overseas investment in Joint Venture in Sri-Lanka	Trade Agreement	Bilateral	India-Sri Lanka	2003
10.	Software Training Programme	India provided specialized program on software training for Vietnamese candidates	Capacity Development	Bilateral	India-Vietnam	2005
11.	Visualsoft-KBK Cooperation Agreement	Memorandum of understanding in software development and services between Visualsoft, India and Bumi Komputer (KBK)	Technology Transfer	Inter-Firm	India and Malaysia	1997
12.	ICT Research and Training Centre	Centre for Development of Advanced Computing (C-DAC) and Indian Institute of Technology, Mumbai	Financial Assistance	International Orgn.	Development Gateway, India	2006
13.	India-Ethiopian Agreement	Deployment of Aid Management System	Technology Transfer	International Orgn.	India, Ethiopian	2006
14.	Japan-India-Korea	Implementation of various programmes in the areas of e-Government and Open Source Software	Experience Sharing	Trilateral	Japan, China, Korea	2006
15.	IBSA Economic Cooperation	Trade Agreement, Open Source, Experience sharing	Trade Agreement, Open Source, Experience sharing	Trilateral	India-Brazil-South Africa	2003
16.	Chinese Technology Cooperation Agreements	General training courses including Software Technology Courses	Capacity Development	Bilateral	China and Others	1994
17.	Indian Scholarship Scheme	Scholarships Scheme for Developing Countries under Indian Technical Cooperation Programme (ITEC), Government of India	Capacity Development	National	India and others	1964
18.	Indo-Nigerian Cooperation on Railway Systems	India-Nigeria bilateral agreement on the design of Management Information System for Nigerian Railway system	Tech Transfer	Bilateral	India, Nigeria	
19.	Agrivista Project	IT for sustainable agriculture, natural resource and rural economic development	Technology Transfer		Global	1998
20.	Asia Pacific Center for transfer of Technology	Transfer technology	Tech Transfer	Regional	Regional	
21.	UN-IIST Programmes	E-Government Development, Open Source, Curriculum development, Schools and Courses, Fellowships	Capacity Development pen source	International Orgn.	regional	1992

Source: Excerpted from Adegboyega Ojo, Rilwan Basanya, Tomasz Janowski and Mike Reed (2007) *South-South Cooperation in Software Technology*, UNU/IIST Report # 371, Macau: UNU/IIST.