

1. We, the APEC high-level representatives responsible for policy and partnership in science, technology and education and building human resources in higher education, science and technology, and research and development as well as representatives from trade and industry, and other representatives from business and academia, met in Manila, Philippines on August 13 and 14, 2015 for the APEC High-level Policy Dialogue on Science and Technology in Higher Education with the theme, **“Developing 21<sup>st</sup> Century Innovators for Inclusive, Resilient and Sustained Growth.”**
2. We met under the theme of APEC 2015 Philippines, “Building Inclusive Economies, Building a Better World,” guided by the 22<sup>nd</sup> APEC Economic Leaders’ Declaration encouraging APEC economies to prioritize stabilizing and expanding employment, implementing macroeconomic policies in favor of job creation, and strengthening capacity building for human resources development, vocational skills development and skills training for youth, enhancing the participation of women in the economy.
3. We are specifically guided by the 6th HRD Joint Ministerial Statement and the Action Plan 2015-2018 on promoting quality employment and strengthening people-to-people connectivity through human resources development, taking into account the three (3) priority areas such as: a) Supporting inclusive and sustainable growth to address the social dimensions of globalization, including equality and needs of vulnerable groups; b) Enhancing human resource quality to meet supply chain demands; and c) Facilitating mobility of researchers, students, labor and skills development. Research collaboration can help tackle global issues and address costly, complex and multi-faceted problems.
4. We also recognize the APEC Connectivity Blueprint for 2015 to 2025 which underlines the importance of physical, institutional and people-to-people connectivity and the role of cross-border education cooperation in promoting economic development through knowledge and skills transfer towards achieving an integrated Asia-Pacific and driving APEC progress.
5. We also consider the Policy Partnership on Science Technology and Innovation (PPSTI) 2015 Work Plan that encourages and supports Science, Technology, and Innovation in Small and Medium Enterprises (SME) through multiple channels and platforms and fosters collaboration among government, industry, and academia.
6. We also recognize the Human Resources Development Working Group (HRDWG) 2015 Work Plan that encourages and promotes cross-border education cooperation, academic mobility, improving the quality of education and development of 21st century skills.
7. We reaffirm the importance of cross-fora collaboration on Education, Science, Technology, and Innovation and other related areas of collaboration indispensable for inclusive growth of APEC economies.

**Developing the 21st Century Science and Technology Innovators:  
Key to Inclusive, Resilient and Sustained Growth**

8. We recognize that diversity in human resource spurs entrepreneurship and innovation.
9. We acknowledge that supporting and promoting Science, Technology, and Innovation talent mobility helps the sustainable development of societies and growth of

economies. We support policies that facilitate the mobility of highly skilled human capital as well as policies aimed at promoting the international mobility of academics, researchers, and students to facilitate innovation and sustainable growth.

10. We emphasize the need for diversity in academia and its importance in yielding high research productivity, intellectual capital, innovation and collaboration. High quality research systems are vital for APEC member economies' economic and social development. This can be achieved by learning from each other about research policies and strategies both in research training and in undertaking research.
11. We support the Port Moresby 2015 High-level Policy Dialogue on Human Capacity Building, particularly a) its focus on the 21st century skills, including Science, Technology, Engineering, and Mathematics (STEM) education, to address the advanced technology requirements of 21st century jobs in the context of knowledge based economy building and to face the changes in our markets; and b) its strategic approaches to align education and training to industry needs in the 21st Century.
12. We recognize the need for Science, Technology, and Innovation experts who are pivotal to developing innovations. APEC economies should share information about approaches to research workforce planning and encouraging university – industry links.
13. We recognize the varying levels of advancements and diversity in the higher education systems as well as marked differences in innovation and the scientific and technological progress among APEC member economies. This situation has summoned us to engage in this high-level policy dialogue specifically on the themes: a) Innovations in Higher Education Delivery Modalities and Strategies Focusing on Science and Technology Programs, b) Ensuring Relevance, Utilization and Contribution of Products of Science and Technology in Higher Education for Economic Development in the APEC Region, and c) Technologies and S&T Concerns of the Future: Implications for Future Careers.
14. Under the three themes, we discussed the following areas of interest for APEC Economies: a) Food Production and Security, b) Environment, Disaster Risk Reduction and Response, Climate Change and Energy, c) Marine Resources/Systems: Economy, Biodiversity and Conservation, d) Smart Analytics and Engineering Innovations, and e) Health Systems. These themes are important for inclusive, resilient and sustained growth of APEC member economies.
15. We believe that human capital development and Science, Technology, and Innovation investments in these areas are pivotal to sustained and inclusive growth in the APEC region.
16. We recognize the importance of the role of connectivity and information technologies in science and technology for higher education.
17. We affirm the importance of enhancing the participation of women and other underrepresented groups in scientific and technological fields and in higher education.

**We call on the APEC economies to pursue the following strategic courses of action, taking into account the various levels of autonomy of post-secondary institutions in**

**the APEC region, as well as differences in the division of constitutional responsibilities:**

18. We propose to encourage implementation, through existing mechanisms, namely the Human Resources Development Working Group (HRDWG) and the Policy Partnership in Science, Technology and Innovation (PPSTI), the following: a) Mobility of Science, Technology, and Innovation Experts, and b) Advancing Cross-Border Education and Inter-University Collaboration on Science and Technology.
19. We encourage both groups to include future joint discussions on initiatives on science, technology, and innovation in higher education.

### **Mobility of Science, Technology, and Innovation Experts**

20. We propose to devise a plan that can lead to feasible mechanisms for increased and enhanced mobility of Science, Technology, and Innovation experts, informed by a cost-benefit analysis and user-based assessment.
21. We recognize that the Researcher Mobility Workshop to be held in Jakarta, Indonesia in December 2015 will help better establish the scale and characteristics of research cooperation across APEC, the barriers and benefits of that cooperation and ways in which economies can work together to enhance research cooperation by bringing together experts from governments, academics, university leaders, industry partners and research organizations from across the Asia-Pacific.

### **Advancing Cross-Border Education and Inter-University Collaboration**

22. We recognize the importance of inter-university collaboration for research cooperation, and the mobility of students and researchers. Universities in APEC economies can and do make a vital contribution to economic growth and social well-being both through the development of STEM education and research skills and through the research that they undertake. This applies throughout the research spectrum from basic research through to applied research and development.
23. In consonance with realizing the APEC 2012 Leaders' Declaration in Vladivostok on Promoting Cross-Border Education Cooperation, we propose to explore mechanisms to better facilitate student, researcher and providers' mobility in the Asia Pacific Region and encourage the conduct of the regular APEC Conference on Cooperation in Higher Education and other meetings about relevant issues in higher education, subject to endorsement by the economies.
24. We suggest identifying and addressing matters that are pivotal to Cross-Border Higher Education and Inter-University Collaboration such as: a) cross-border supply, where services are transmitted across borders (such as twinning and distance or online education programmes), b) credit transfer of students involved in study-abroad Science, Technology, and Innovation programmes, c) recognition and validation of short-term studies and research internships in the context of the field of Science, Technology, and Innovation through regional platforms, d) institutional mobility (i.e., cross-border education service providers with branch campuses, franchises, and other similar commercial arrangements), e) transnational individual service providers (i.e., individual educators and researchers crossing borders to provide academic and

research services), f) interdisciplinary research to address global problems, and g) agreements on data sharing and intellectual property policies.

25. In the interest of catalyzing regional innovation in Science, Technology, and Innovation, we propose that initial focus of policy assessment be on the potential for twinning programmes on doctoral degrees in support of APEC priorities.

26. In light of this evolving terrain in higher education, we propose to study where appropriate, or share information about qualification frameworks, professional standards, and novel quality assurance control policies or mechanisms that can promote equity and quality of expanding higher education systems in the APEC region.

## **Conclusion**

27. We express our deep gratitude for the hospitality and all arrangements made by the Philippines for the success of this meeting.

28. We will encourage, explore and promote a closer link between human capacity building in science, technology, and innovation in higher education, STEM career pathways, occupational and employment needs, as well as the needs of business and industry in science, technology, and innovation, in order to develop and harness inter alia regional innovations in science and technology and build more inclusive economies.

29. We intend to continue and step up our opening initiatives in the succeeding High-Level Policy Dialogues as well as foster and develop cross fora cooperation in the issues of science, technology and innovation in higher education. In this regard we agreed to continue the cooperation on a regular basis with engagement of stakeholders such as business, experts, and professional bodies under the title High-Level Policy Dialogues on Science, Technology and Innovation in Higher Education.

30. We encourage APEC, in particular, the Human Resources Development Working Group (HRDWG) and the Policy Partnership in Science, Technology and Innovation (PPSTI), to take forward the initiatives agreed upon in the High-Level Policy Dialogue on Science and Technology in Higher Education.

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