

<b>Sub-program (Target Priority Area)</b>	1. Improvement of Economic Infrastructure
<b>Component (CP) (Development Issues)</b>	<b>1-4. Enhancement of Agriculture, Water Resources and Rural Development</b>
<b>Expected Research Areas</b>	Agricultural Policy, Agricultural Economy and Agribusiness, Community Development, Crop/Fruits Production and Food Processing, Watershed Management and Integral Water Resource Management <i>* Take the following "Direction of Study (Background of Component)" into account before making your research plan.</i>
<b>Accepting University</b>	<p><b>Hiroshima University</b> (Acceptable number of seat: 2) <b>GS of Advanced Science and Engineering</b></p> <p>(1) <u>Division of Advanced Science and Engineering, Transdisciplinary Science and Engineering Program</u></p> <p>&lt;Available degree (s)&gt; Master of Philosophy, Master of Engineering, Master of International Cooperation Studies <i>If applicants do not fulfill a regular period of school education (16 years from primary school to university), the eligibility will be assessed.</i></p> <p><b>Ritsumeikan University</b> (Acceptable number of seat: 2) <b>GS of Life Science</b></p> <p>(1) <u>Applied Chemistry Course,</u> (2) <u>Biotechnology Course,</u> (3) <u>Bioinformatics Course,</u> (4) <u>Biomedical Sciences Course</u></p> <p>&lt;Available degree (s)&gt; Master of Science, Master of Engineering <i>If applicants do not fulfill a regular period of school education (16 years from primary school to university), the eligibility will be assessed.</i></p>
<b>Target Officers</b>	All CSS/Cadre officers and Federal Ex-Cadre officers (BPS17 and above)
<b>Target Organizations</b>	All Government Organizations (except Corporate Body)
<b>Direction of Study (Background of CP)</b>	<p>Agriculture is Pakistan's main industry, which accounts for 21% of GDP and 60% of the total export amount. Agriculture, in which 43.7% of the total workforce is engaged, contributes to absorbing an increasing workforce. Production of main crops, such as wheat (ranked the seventh in the world) and cotton (the fourth in the world), accounts for 8.4% of GDP. Livestock production accounts for 11.8% of GDP. Thus, agriculture is the sector that contributes to GDP.</p> <p>Brokers who purchase and distribute agricultural products harvested in bulk to the market still exist in Pakistan, which poses an issue that prevents enhancement of small farmers' livelihood. It is desirable to establish agribusiness which benefits small farmers through cultivation suitable to the climate in each region and systematic value addition to and sales of agricultural products on the market by farmers themselves.</p> <p>As many parts of the land are dry or semi-dry areas, Pakistan is highly dependent on irrigation. However, many irrigation facilities were constructed almost 100 years ago and show significant deterioration. Therefore, the urgent issues include development of new water sources, appropriate update of existing facilities, development and extension of efficient water-saving irrigated agricultural techniques, and introduction of the concept of integrated water management of underground water and surface water. In addition, irrigation facilities are concentrated in the Punjab State. Therefore, the crop production and number of livestock fed per person are the highest in Punjab. The disparity of agricultural productivity among regions causes an income disparity among farmers. Therefore, it is necessary to promote an initiative to solve this regional disparity.</p> <p>The government of Pakistan, in its long-term national policy "Vision 2025," states that efficient use of water, promoting saving water, and institutionalization of water resource management among sectors or regions are the elements for "energy, water, and food security" and urges the necessity for promotion of high value-added products, agricultural product processing, supply chain improvement, and increase in milk cattle yield to realize the knowledge based economy through high value addition. It is an urgent task to develop the capacity of administrative officials in charge of agriculture and agricultural development policies, ranging from formulation of effective policies and strategies to promotion of activities of farmers' organizations, depending on the situation of farming communities in each region.</p>

	<p>Under the priority areas for Pakistan, the government of Japan aims to develop its agricultural market economy that is sound and accessible by the poor. This program is positioned in this context. Up until now, Japan has dispatched experts and implemented technical cooperation projects to support formation of specialty production areas and production of high value-added products. In addition, to strengthen irrigated agriculture, Japan has implemented the yen loan project with the aim of functional improvement of the irrigation system and supplementary projects for yen loan for research and extension of water saving technology and extension of the participatory irrigation management system.</p> <p>At this component, especially for development of agriculture and rural areas for socioeconomic development, JDS is expected to contribute to capacity development of administrative officials in charge of correction of disparity among rural areas, improvement of small farmers' livelihood, formation of specialty production areas and promotion of high value-added products, and integrated water resource management for sustainable irrigated agriculture.</p>
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