



*Report on Awareness Workshop on*

## **Biorisk Management – The Way Ahead**

**Phuket, Thailand, 19-21 April 2017**

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An awareness workshop was held at Phuket, Thailand, participated by experts of Dairy Science Park (DSP), Peshawar, Pakistan and Sandia National Laboratories (SNL), Albuquerque, NM, USA. The meeting was held on 19<sup>th</sup> to 21<sup>st</sup> April, 2017. The workshop was focused on awareness of the policy makers about the biorisk management (BRM) concepts and identifying the areas of interventions into the functions of government, academia and private sector organizations, with special focus on documenting and improving the status of biosafety and biosecurity associated with laboratory operations, clinics and the human food chain. In addition, the integration of Biorisk Management Curriculum into the existing curricula of Pakistani Universities and development of new courses with the coordinated efforts of the provincial and federal governments, private sector and civil society were considered.





The workshop was attended by Mr Muzaffar Said, Minister for Finance in the Government of Khyber Pakhtunkhwa, and Mr Arif Yousaf, Special Assistant to the Chief Minister KP. The University of Agriculture Peshawar was represented by Prof M Subhan Qureshi, Dean FAHVS/Chief Patron DSP; Prof Umar Sadique, Chairperson Animal Health; Dr Naila Chand, Chairperson Poultry Science; Dr Murad Ali, Dr Farhan Anwar, Mr Rafiullah Khan, Mr Arshad Zahoor and Mr Shah Murad Khan.

Mr Nasir Shah represented FATA University, Dr Zia Ul Haq KMU, and Dr M Azam Kakar World Bank. DSP was represented by Engr Irfan ul Haq Qureshi and Ms Samina Qureshi and Sandia National Laboratories was represented by Dr Melissa Finley, Ms Iris Shurdhi, Mr Robert Otero and Mr Waleed Joyan.

Mr Muhammad Luqman DG SDU Government of KP, Dr Khalid Khan Additional Secretary HED and Prof Zahoor Swati Vice-Chancellor UAP could not get NOC for the visit although the Chief Minister KP had advised the relevant department for the same. The Minister Finance took serious notice of the non-issuance of NOC to the delegates and promised to look into the issue on his return to Peshawar. Mr Kamran Khan Secretary DSP and Mr Niaz Ahmed Naz Ex-President KPCCI could not participate due to their business engagements.



*First day of workshop*



*Sandia team*



*The participants*



The Workshop was a follow-up program for establishing a Center of Excellence for Biorisk Management, proposed during Pakistan Biorisk Management Curriculum Development Workshops held at Dubai and Bangkok in April/November 2016. It was anticipated that the University of Agriculture Peshawar will be the leader in the region for developing and integrating biorisk management into existing university courses, creating courses in biorisk management, developing quality standards and protocols, and will subsequently provide guidance to other universities and colleges in the region. The present workshop was focused on involving the top policy makers of the province in consultation on various aspects of Biorisk Management, so that the concepts could be integrated into policies, development plans and projects for future funding.



*Mr Nasir Shah presenting his paper*



*Prof Qureshi and Mr Waleed at wrap up session*



*Certificate distribution ceremony*

The workshop was sponsored by Sandia National Labs, USA as the fourth event of its kind. On the first day, the registration of participants and opening remarks were followed by an overview of the previous collaboration between the Dairy Science Park and Sandia National Laboratories regarding Biorisk Management. The background was explained by Dr Melissa Finley and Ms Iris Shurdhi.

The International Biological and Chemical Threat Reduction (IBCTR) Program was reviewed. The knowledge and skills required to effectively design, implement and evaluate a curriculum were reviewed. Curriculum development steps and the application of brain-friendly teaching approach with integrated teaching styles were presented.

Prof Qureshi informed that KP Food Safety Authority has been established under an Act of the Parliament and Dairy Science Park will play its role in introducing quality control





procedures, with primary focus on biorisk management concepts developed during interaction with the Sandia National Laboratories.

Mr Arif Yousaf informed that an SDGs Task Force (STF) has been established at the Provincial Assembly of Khyber Pakhtunkhwa. The Cell comprises MPAs, headed by Mr Arif Yousaf. A Sustainable Development Unit has been established at the Planning and Development Department, Government of Khyber Pakhtunkhwa, monitoring progress of the administrative departments on implementation of the SDGs. The STF has notified the Fourth International Conference and Industrial Exhibition at Konya, Turkey on November 1-5, 2017 and will

pursue its successful arrangements at the public and private sectors.

Mr Nasir Shah presented his paper on “Higher Education Commission: Challenges and Opportunities”. He appreciated the Chinese assistance to Pakistan under CPEC and the US assistance under the Knowledge Corridor. He highlighted the suffering of the tribal people in FATA due to the global war on terror and suggested collaboration with DSP for food based entrepreneurship supported with BRM principles.

The Finance Minister showed his dissatisfaction over performance of Higher Education Regulatory Authority (HERA) KP and Mr Nasir assured him for support of the DSP team.

On the second day, Ms Iris presented IBCTR overview – Global Biorisk Management Curriculum (GBRMC), mainly based upon biosafety and biosecurity concerns. Lab certification was considered as an important tool to respond to the challenges in the field. Ms Iris highlighted the importance of Assessment, Mitigation and Performance (AMP) approach of SNL.



*Tea break*



*Inter-sessions Interval*



*Visit to Masjid Nurul Islam in Patong, Phuket*



*Visit of DSP team to Phuket Rajabhat University*

Mr Waleed Joyan introduced the Biosafety Risk Assessment which allows the laboratory to determine the relative risk of its different activities that pose, and helps guide risk mitigation decisions so that these are targeted to the most important risk. Risk was described to be a function of likelihood and consequences, ranging from very low to very how along x and y axes. Risk Assessment Strategy was explained and BioRAM (Biosafety and Biosecurity RAM) was introduced as the available tool to aid in the laboratory risk assessment process. Risk Mitigation was explained as action and control measures that are put into place to reduce or eliminate the risk associated with biological agents and toxins. Mitigation Control measures, engineering/administrative/procedural controls, SOPs and various types/levels of security were discussed, participated by the delegates.





Dr Zia from KMU and Dr Umar from UAP presented the course outlines approved by the respective bodies of the universities to accommodate BRM related curricula. Dr Sher Bahadar will prepare the final draft to be shared with SNL before implementation at the Universities.

Prof M Subhan Qureshi presented achievements made under DSP with special reference to SDGs and BRM. Future roadmap was shared with the delegates comprising achievement of the SDGs number 2: Food Security; 3: Healthy lives and; 8: Sustainable economic growth. The tools suggested for implementation were: 1) Academic: Academic Support to Livestock SMEs, Responsibility UAP, cost Rs.1000 million; 2) Development: DSP Board, Responsibility: SDU, Cost Rs.500 million; 3) Civil Society: Govt-Academia-Industry Linkages, Responsibility: DSPS, cost Rs.100 million. As the task comes under domain of various ministries, the Senior Minister has agreed on establishment of a Task Force on Dairy Science Park, to be notified soon.

At the concluding session, Mr Arif Yousaf commended the efforts of DSP and Sandia National Labs in joining hands to respond to the biorisk management challenges which threaten both public and animal health, and income generation of the poor families in the region, especially Khyber Pakhtunkhwa, Pakistan. Mr Yousaf referred to the guidelines provided by the Chairman of the ruling party, Pakistan Tehreek-e-Insaf, Mr Imran Khan, to involve the youth in productive activities and to utilize their educational qualifications and professional skills in promoting economic activities in the region. Legislation has been made regarding access to information, police reforms, and improvement in primary, secondary and tertiary education and the local government system.

The Finance Minister appreciated the collaborative efforts of the SNL and DSP in forwarding the agenda of BRM in the interest of the people of KP and FATA. He ensured support of his ministry in allocating fund for these specific activities. The scope of Dairy Science Park for achieving the Sustainable Development Goals of the United Nations, comprising Food Security, Food Safety and Economic Empowerment of the people will be supported by the provincial government in light of recommendations of this forum. He



Patong Beach, Phuket



acknowledged support of the SNL team and the United States government for their support to provide solutions for our local issues.

He assured his support for the SNL-DSP collaboration and wished successful event of BRM consultation in Malaysia and DSP 2017 conference in Turkey.

## **Recommendations**

During various presentations, the participants discussed the issues in detail and suggested measures through collaborative efforts of all stakeholders to be led by DSP-SNL partnership. The recommendations are summarized as follows:

- i) Dairy Science Park would train Food Safety Officers and develop quality and Halal standards with the cooperation of development partners like SNL, KMU and others. Diagnostic kits will be developed for detection of pathogens, toxins and Halal quality. A development project may be sponsored by the provincial government for this purpose.
- ii) The provincial government is considering establishment of a Dairy Science Park Task Force (DTF) to take care of interests of the producers, processors, consumers and service providers through various ministries. An earlier notification of the DTF was recommended.
- iii) The SDGs Task Force, Provincial Assembly KP must review the provincial priorities under SDGs and the sectoral policies and development plans must be tailored with the SDGs priorities;
- iv) The STF comprising parliamentarians must be supported by a group of technocrats to identify peoples' issues related to SDGs. Intervention strategies were suggested related to food safety, food security and youth entrepreneurship as covered under SDGs number 2, 3 8; accepted by the United Nations as #SDGAction9671 initiated by DSP.
- v) Establishment of community colleges under FATA University with the collaboration of DSP, to develop capacity of the people for utilizing indigenous resources for poverty alleviation, hygienic food production and youth employment.
- vi) Dr Azam Kakar from the World Bank Quetta suggested establishment of the Baluchistan Chapter of DSP to develop livestock resources, especially the sheep population on commercial basis. It was suggested that the local resources in KP and Baluchistan need to get developed through special economic zones, based upon availability of the local livestock, poultry and wildlife populations. The Higher Education



*Delegates with Finance Minister*



Commission has introduced tools of ORIC offices/Business Incubation Centers at various universities, which will be utilized by DSP through partner universities and the private sector.

- vii) The security personnel may be trained in biorisk management so that their health could be protected and good practices could be introduced at the international borders for protecting health of animals and the people. In addition, the capacity of the laboratories may be enhanced to handle forensic samples. It was recommended that:
- viii) A Center of Excellence on Biorisk Management (CE-BRM) will work on development standards and imparting training to the biomedical workers and related professional groups in biosafety and biosecurity. CE-BRM will be established at Peshawar to be jointly managed by various partner universities of DSP.
- ix) To bring reforms into the structure and function of HERA in public interest and to utilize resources of the KP Board of Investment and Trade to support the small businesses engaged with food production in reducing cost of production and reducing risk of food related risks to the public health. The performance of various departments needs to be reviewed through a questionnaire to be monitored by the Finance Minister.
- x) The personnel trained under the SNL-DSP collaboration would be registered as alumni and the provincial government will implement the good practices in biorisk management at various points of the food value chain, as a part of KP DSP Act of the provincial Assembly.
- xi) Upgradation of the biological laboratories to BSL-2 and 3. Eating dinosaur at the right time was the basis of responding to the BRM challenges.
- xii) Pursuant to the recently promulgated KP Food Safety Authority Act 2014, it was recommended to revise the Act in light of the BRM and entrepreneurship challenges in the food value chain, with support of the academia-industry partnership.
- xiii) DSP will coordinate with the local and regional universities/organizations to accommodate Biorisk Management courses at provincial, national and regional levels.



*Renaissance Phuket Resort and Spa*

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