

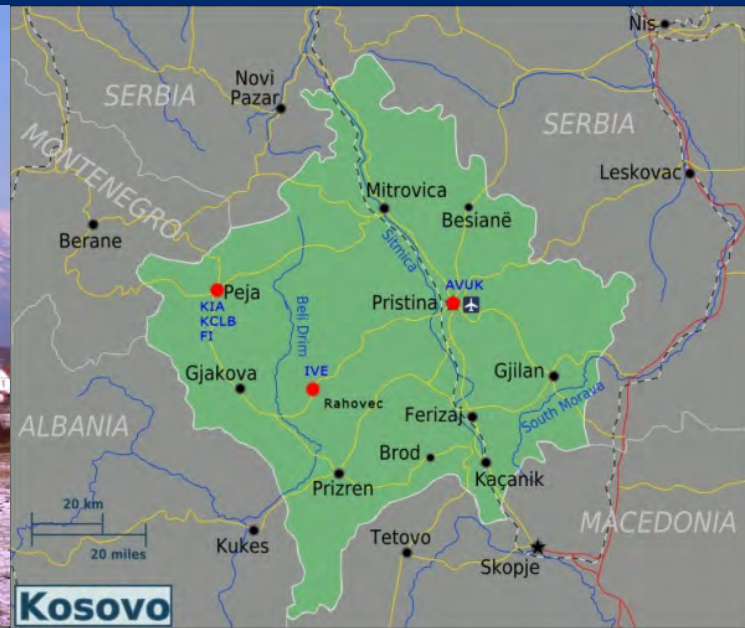


**USAID**  
FROM THE AMERICAN PEOPLE

**KOSOVO**

# KOSOVO NEW OPPORTUNITIES FOR AGRICULTURE PROGRAM

STRENGTHENING THE ADVISORY AND TECHNICAL SERVICES OF THE MINISTRY OF AGRICULTURE, FORESTRY AND RURAL DEVELOPMENT (MAFRD) BY REORGANIZATION OF ITS LABORATORIES



**FEBRUARY 2012**

This publication was produced for review by the United States Agency for International Development. It was prepared by Tetra Tech ARD.

## Acknowledgements

I would like to express my sincere thanks to his Excellency Mr. Blerand Stavileci, Minister of MAFRD for the possibility, excellent assistance, open information exchange and hospitality offered at his Ministry during my mission. Without the excellent support from Mr. Greg Vaut, Senior Technical Advisor to the Minister, MAFRD via NOA, Mrs. Nysrete Doda-Gashi, advisor to the Minister, Plant production and protection, Mr. Shaban Dreshaj, Chief of the Advisory Services, Mr. Behlul Behluli, Advisor to the Minister for Livestock Production and the excellent translation by Mr. Inan Mahmuti, this mission could not have been possible. Thanks also to the central and local office of NOA, Tetra Tech ARD (in particular Mrs. Claudia LaLumia and Mr. Martin Wood, respectively) for excellent and friendly organization of the mission. Thanks to all colleagues of MAFRD, NOA and Kos-Agri, EU Office and GIZ and others for hospitality and friendship!

This report was prepared by the New Opportunities for Agriculture project team of Tetra Tech ARD based on a Final Report prepared by: Dr. Jaap D. Janse, Department of Laboratory Methods and Diagnostics, Dutch General Inspection Service, The Netherlands.

### USAID Contact Information:

- USAID/Kosovo Office of Economic Growth: Timothy Hammann, Senior Economic Growth Advisor, [thammann@usaid.gov](mailto:thammann@usaid.gov)
- Contracting Officer's Technical Representative: Besa Ilazi, Office of Economic Growth, [bilazi@usaid.gov](mailto:bilazi@usaid.gov)

### NOA Contact Information:

- Chief of Party: Martin Wood, New Opportunities for Agriculture, Kosovo [mjbwood@noakos.com](mailto:mjbwood@noakos.com)
- Senior Technical Advisor/Manager: Claudia LaLumia, Associate, Tetra Tech ARD, [claudia.lalumia@tetrattech.com](mailto:claudia.lalumia@tetrattech.com)
- Study Supervisor: Greg Vaut, Senior Advisor to the Minister of Agriculture, Forestry and Rural Development and Senior Associate, Kosovo, [greg.vaut@rks-qov.net](mailto:greg.vaut@rks-qov.net)
- Author: Dr. Jaap D. Janse, Department of Laboratory Methods and Diagnostics, Dutch General Inspection Service, The Netherlands, [jjanse@nak.nl](mailto:jjanse@nak.nl)

Prepared for the United States Agency for International Development, USAID Contract Number EDH-I-00-05-00006-00, TO AID-167-TO-11-0000, Kosovo New Opportunities for Agriculture Program, under the Rural and Agricultural Incomes with a Sustainable Environment (RAISE Plus) Indefinite Quantity Contract (IQC).

Implemented by:

Tetra Tech ARD  
159 Bank St., Suite 300  
Burlington, VT 05401

# KOSOVO NEW OPPORTUNITIES FOR AGRICULTURE PROGRAM

STRENGTHENING THE ADVISORY AND  
TECHNICAL SERVICES OF THE MINISTRY  
OF AGRICULTURE, FORESTRY AND RURAL  
DEVELOPMENT (MAFRD) BY  
REORGANIZATION OF ITS LABORATORIES

FEBRUARY 2012

## **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

# CONTENTS

<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>iii</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1.0 INTRODUCTION AND BACKGROUND.....</b>	<b>5</b>
<b>2.0 OBJECTIVES OF THE MISSION AND ACTIVITIES DURING MISSION .....</b>	<b>11</b>
<b>3.0 GENERAL OBSERVATIONS .....</b>	<b>15</b>
<b>4.0 SPECIFIC OBSERVATIONS .....</b>	<b>18</b>
<b>5.0 GENERAL RECOMMENDATIONS .....</b>	<b>23</b>
<b>6.0 CRITERIA FOR A NATIONAL REFERENCE LABORATORY .....</b>	<b>31</b>
<b>7.0 SPECIFIC RECOMMENDATIONS AND ACTIVITIES PROPOSED .....</b>	<b>33</b>
7.1 KIA .....	33
7.2 KFVA .....	34
7.3 IVE .....	34
7.4 KCLB .....	35
7.5 KFI .....	35
<b>8.0 SUMMARY, CONCLUSIONS AND MAIN CONSTRAINTS .....</b>	<b>40</b>
<b>LIST OF ANNEXES .....</b>	<b>43</b>
<b>LIST OF TABLES</b>	
Table 1 – Agricultural Land Use in Kosovo, 2009.....	7
Table 2 – Data on Livestock in Kosovo (2008) .....	8
Table 3 – Principal Kosovo Laws of Importance to the Activities Described in this Report.....	9
Table 4 – Proposal for number of qualified staff to be appointed as foreseen in reorganization/restructuring .....	36
Table 5 – Indicative Activity Plan and Timetable for Repositioning and Restructuring MAFRD Laboratories .....	37
<b>LIST OF FIGURES</b>	
Figure 1– Visit to Kosovo Institute of Agriculture (KIA), Peja. Analytical laboratory (soil analysis, pesticides).....	21
Figure 2 – Visit to KIA, phytopathology/bacteriology laboratory (pesticides).....	21
Figure 3 – Visit to Kosovo Center for Livestock Breeding (KCLB), Peja .....	21
Figure 4 – Visit to KCLB, insemination laboratory .....	21
Figure 5– Visit to Visit to Institute for Viticulture and Enology (IVE), Rahovec. Wine testing laboratory .....	21
Figure 6 – Visit to IVE. Organoleptic laboratory.....	21
Figure 7 – Visit to Kosovo Food and Veterinary Agency, Pristina. Microbiological laboratory .....	22
Figure 8 – Visit to KFVA, Pristina. Serological Laboratory .....	22
Figure 9 – Visit to Faculty of Agriculture, University of Pristina (FAUP), Pristina. Microbiology Laboratory .....	22
Figure 10 – Visit to FAUP. Chemistry Laboratory.....	22
Figure 11 – Visit to fruit grower, Peja. Grafting of fruit trees.....	22
Figure 12 – Visit to Vegetable producer, Peja. Storage of cabbage and onion.....	22
Figure 13 – Institute Reporting Relationships Before and After Proposed Restructuring .....	25

Figure 14 – Flow Diagram Proposed Restructuring with Explanation .....28  
Figure 15 – Proposed Reorganization of the Agricultural Extension Service. February 2012 ..... 46

# ACRONYMS AND ABBREVIATIONS

ARDP	Agriculture and Rural Development Plan (2007-2013 and 2009-2013)
ATSD	Proposed (in this report) new Advisory and Technical (lab) Services Directorate of MAFRD
BIP	Border inspections post
CIHEAM	<i>Centre International de Hautes Études Agronomiques Méditerranéées</i> , Bari, Italy
ECLO	European Commission Liaison Office
EPPO	European Plant protection Organization
EU	European Union
FAUP	Faculty of Agriculture and Veterinary, University of Pristina, Pristina, Kosovo
IPH	Institute of Public Health, Ministry of Public Health, Pristina, Kosovo
IPPC	International Plant protection Convention
ISO	International organization for standardization
ISPM	International Phytosanitary Measure
ISTA	International Seed Testing Association
IVE	Institute for Viticulture and Enology, Rahovec, Kosovo
KFI	Kosovo Forestry Institute, Peja, Kosovo
KIA	Kosovo Institute of Agriculture
KCLB	Kosovo Centre for Livestock breeding, Peja, Kosovo
KFVA	Kosovo Food and Veterinary Agency, Pristina, Kosovo
KSDP	Kosovo Development Strategy Plan
MAFRD	Ministry of Agriculture, Forestry and Rural Development
NGO	Nongovernmental organization
NOA	New Opportunities for Agriculture
NRL	National reference laboratory
PRA	Pest Risk Assessment

# EXECUTIVE SUMMARY

This report reflects the results of a mission that was part of an ongoing comprehensive situation analysis and information needs assessment started by MAFRD in Kosovo, with the support of USAID/Kosovo through the New Opportunities for Agriculture Program (NOA), to support the development of the field extension capacity of MAFRD's Agricultural Advisory Services and strengthen and functionalize the agricultural institutes belonging to the Ministry of Agriculture, Fisheries and rural Development (MAFRD).<sup>1</sup>

The *main aim* of this activity of USAID is to *realign agricultural institutes* more closely to the Ministry's current extension strategy and priorities, namely **1) integrating them into a delivering modern technology and technological services to their clients** (field advisors, producers, agribusiness and inspection services) and **2) concentrate more on diagnostic services, applied research and demonstration in support of their main advisory and diagnostic roles** (for a **flow diagram of overall proposed structure, see page 47**). To that end an assessment was made of all laboratories involved (that included visits to the laboratories and visits to clients).

The laboratories involved/visited are:

- a) Under MAFRD
  - Kosovo Institute of Agriculture (**KIA**) at Peja,
  - Institute for Viticulture and Enology (**IVE**) at Rahovec,
  - Kosovo Forestry Institute (**KFI**) included in the Kosovo Forestry Agency, Peja
  - Kosovo Centre for Livestock Breeding (**KCLB**) at Peja – now an association;
- b) Under Prime Minister's Office
  - Kosovo Food and Veterinary Agency (**KFVA**) laboratories in Pristina
- c) Under Ministry of Education
  - Faculty of Agriculture, University of Pristina (**FAUP**),
- d) Under Ministry of Public Health
  - Institute of Public Health (**IPH**), Food safety laboratories and
- e) **Private Laboratories**, two laboratories were visited.

Due to weak financial position and knowledge of farmers and poor functioning extension services, supporting laboratories of institutes and inspection services, quality in agriculture and agricultural products is poor and is not competitive in exports. Moreover also due to a weak inspection regime, basic material of lower quality can relatively easily enter the Kosovo agricultural system. This leads to many problems from pests and diseases, aggravated by lack of cultivation knowledge (e.g. soil preparation, pesticide usage) of farmers and a poorly functioning monitoring, surveying activity and information sharing from the governmental side. Moreover lab/advisory service and diagnoses are sometimes so poor that producers prefer to send samples and seek advice abroad. The situation is also deplorable in forestry for similar reasons, leading to increased occurrence of (untreated) pests and diseases. Deforestation (illegal wood cutting), fires, and neglect of forest stands also play a role.

---

<sup>1</sup> For an organigram of MAFRD see **Annex 1**, for a preliminary flow diagram on restructuring of the Field Advisory Services see **Annex 2**.

To tackle these problems the new Department of Agriculture, Forestry and Rural Development (DAFRD, formed by the UNMIK administration in 2002)<sup>2</sup> launched and enforced the so called “Agricultural and Rural Development Plan for Kosovo” (ARDP) 2007-2013 at the end of 2006, with an update in 2009. The two main objectives of ARDP 2009-13 are to:

1. Restructure Kosovo agri-rural sector in line with that of the EU, so that it can fulfill its obligations in this sector when it becomes a member of the EU; and
2. Improve the standard of living of the rural population (including reducing poverty, where it exists): narrowing urban and rural disparities, providing increasing support to less favored areas, and narrowing disparities between Kosovo and the EU.

Much has already been achieved:

- Legislation is mostly in place and for a larger part harmonized with EU legislation; and
- Institutes have partially restored and equipped, mainly with donor aid from USAID, the Italian Kos-Agri project (CIHEAM, Bari, Italy), Swiss InterCooperation, GIZ, and others.

However, there is still

- a) Severe lack of focus on applied research and diagnostic service to support agricultural advisory services;
- b) Lack of competent and adequately trained staff for labs (due in part to a weak education system in the Agricultural University);
- c) Lack of actual data on the occurrence of (quarantine) pests and diseases; and
- d) Weak border inspection and registration/certification systems.

The outcome of the mission is a set of general and specific (per institute, laboratory) observations and recommendations, where the essence will be a reorganization of MAFRD laboratories in a newly formed Advisory and Technical Services Directorate together with a reorganized Advisory Service (**see Organigram, page 27**) where the laboratory services can better serve their clients in a way as formulated above. Moreover suggestions for repositioning of inspection services is proposed to increase concerted actions of inspection, sampling, monitoring and surveying. Positioning of KIA (and preferably also KFVA) as National Reference Laboratory (NRL) is therefore also proposed (**see Criteria for NRL, page 31**). An NRL is responsible for diagnosis of quarantine pests and diseases, represents the country for method standardization and import/export conflicts and Plant health organizations at an (jnter) national level. An indicative Activity Plan (**Table 5, page 37**) for the proposed changes is provided. Moreover, to assist implementing MAFRD new strategy on advisory and inspection services, staff members of MAFRD were assisted in developing a fiche to obtain IPA EU funds (twinning project) during the mission.

The **main observations, recommendations and conclusions** of this Technical Mission on possibilities for restructuring and reorganization of MAFRD institute laboratories KIA, KFVA, KCLB, IVE and FI, to have them better serve the Field Extension Directorate of the new Agricultural Extension Service, plant and veterinary quarantine needs, and producers (agribusiness and farmers) are:

- 1. The conditions of the Institute laboratories are very diverse** and vary from excellent (KFVA) to virtually inexistent (FI) and are generally **understaffed and technical staff is underpaid**.
- 2. Phytopathology and quarantine are weakly developed** and inadequate in KIA, IVE and FI.

---

<sup>2</sup> The full Ministry (MAFRD) was established in February 2008 at the independence of the Republic of Kosovo.



3. **Plant Quarantine inspectors are placed under the Kosovo Food and Veterinary Agency.** There is no Chief Inspector and **no or only very little surveying and monitoring, border sampling for (plant) quarantine pests and diseases. These are critical needs.**
4. **There is little cooperation or interaction** between the various labs, extension advisors and inspectors and producers; the diagnoses of problems are sometimes poorly substantiated, which has led to a loss of credibility for the institutes as currently operated.
5. Therefore **time to reorient the MAFRD strategy toward developing centers of excellence and national reference laboratories, better serving Kosovo agriculture.**
6. In all institutes there is **definitely a basis and will for change.**
7. On the basis of **very good and open interviews**, information was obtained with which it is **thought necessary and feasible** to propose the creation of a new **Advisory and Technical (lab) Services Directorate and a new Inspectorate with a Chief Inspector in MAFRD, eventually repositioning of KFVA under MAFRD and positioning of KFVA and KIA as National Reference laboratories (NRL's).** See **Summary Diagram, page 27.** This proposal includes:
  - **Formation of new Advisory and Technical Services Directorate** (Director and deputy, assistant and secretary (number of staff to be determined))
  - **Formation of a new Inspectorate with Chief Inspector** comprising the veterinary and plant health inspectors, placed outside KFVA and instructed by Policy department MAFRD (number of new staff to be determined) with adequate training provided
  - **Staffing and equipping laboratories (see Table 4, page 36) for overall estimate**
  - **Staffing of diagnostic departments at KIA with competent and sufficiently trained experts and assistants:** Bacteriology, Entomology, Nematology and Virology and possibly Herbology (**11 new staff**)
  - **refurbishing some institutes** (KIA, KFI), and have quality and safety systems implemented so that they can function as NRL (KIA and KVFA)
  - **installment and operationalization of state of the art equipment**, especially those for **molecular biology**, for adequate diagnoses of (quarantine) pests and diseases at KIA and partly also KVFA
  - Starting **application for accreditation** according to ISO 17025 (KIA, KFVA, IVE) and have quality managers appointed (3 new staff)
  - **formation of specialized (advisory) teams** in the wine and vegetable area as advisor (4 staff) and laboratory experts (4 new staff) and at in forestry at KFI (6 new staff)
  - **Placement of weather disease stations** at IVE and KIA linked to **disease and irrigation prognosis** (number of new staff to be determined)
8. **Refurbishment of labs is (for staff safety and NRL function) mandatory and should be marked as a Ministerial responsibility, using its (increased) capital investment budget**
9. **Restructuring the advisory service and plant health and quarantine department would greatly benefit from an EU Twinning project.** MAFRD prepared a fiche for such a project at the time of this mission and it was subsequently submitted to ECLO.
10. Also, on the basis of the information mentioned above, an **Indicative Activity Plan** and **Timetable (Table 5, page 37)** have been provided
11. Much more (detailed) work and firm steps by the Ministry are needed to get change started. Actually carrying out the proposed changes; and ensuring the sustainability thereof are strongly dependent on the solution of the following main constraints:

- If **revenues** of testing laboratories (KFVA, KIA, Wine Institute) are **not returned** to the Institute due to **inflexibility in budgets and expenditures, and the payment of low salaries for technical staff** persist it will be **virtually impossible to attract and competitively pay and retain critical skilled staff** (staffing and keeping skilled staff and keeping motivation of skilled staff one of the foremost problems in adequate operation of the laboratories).

At the same time and **for the same reason, the** guarantee of the *adequate and timely procurement of consumables* will continue to be impossible as it is now. This makes it extremely difficult or impossible for the institutes to react adequately in the case of outbreaks of new (quarantine) diseases or situations such as the recent land contamination scare.

# 1.0 INTRODUCTION AND BACKGROUND

This report reflects the results of a mission that was part of an ongoing comprehensive situation analysis and information needs assessment started by MAFRD in Kosovo, with the support of USAID/Kosovo through the New Opportunities for Agriculture Program (NOA), to support the development of the field extension capacity of MAFRD's Agricultural Advisory Services and strengthen and functionalize the agricultural institutes belonging to the Ministry of Agriculture, Fisheries and rural Development (MAFRD).<sup>3</sup> The main aim of this activity of USAID is to realign agricultural institutes more closely to the Ministry's current extension strategy and priorities, namely 1) integrating them into a delivering modern technology and technological services to their clients (field advisors, producers, agribusiness and inspection services) and 2) concentrate more on diagnostic services, applied research and demonstration in support of their main advisory and diagnostic roles. To that end an assessment was made of all laboratories involved (that included visits to the laboratories and visits to clients).

The mission was requested by Mr. Greg Vaut, Senior Technical Advisor to the Minister (MAFRD) via NOA and USAID, at the end of December 2011 and organized through the NOA central and regional Kosovo office on short notice during the second half of January 2012.

The laboratories involved are: a) Under MAFRD - Kosovo Institute of Agriculture (**KIA**) at Peja, Institute for Viticulture and Enology (**IVE**) at Rahovec, Kosovo Forestry institute (**KFI**) included in the Kosovo Forestry Agency, Peja, Kosovo Centre for Livestock Breeding (**KCLB**) at Peja – now an association; b) Under Prime Minister's Office - Kosovo Food and Veterinary Agency (**KFVA**) laboratories in Pristina c) under Ministry of Education - Faculty of Agriculture, University of Pristina (**FAUP**), d) under Ministry of Public Health – Institute of Public health (**IPH**), Food safety laboratories and e) Private Laboratories, two laboratories were visited.

The outcome is a set of general and specific (per institute, laboratory) observations and recommendations, where the essence will be a reorganization of MAFRD laboratories in a newly formed Advisory and Technical Services Directorate (see **Organigram, page 27**), where the laboratory services can better serve their clients in a way as formulated above. Moreover suggestions for repositioning of inspection services is proposed to increase concerted actions of inspection, sampling, monitoring and surveying. Positioning of KIA (and preferably also KFVA) as national reference Laboratory (NRL) is therefore also proposed. An indicative Activity Plan and timetable (**Table 5, page 37**) are provided. Moreover, to assist implementing MAFRD new strategy on advisory and inspection services, staff members of MAFRD were assisted in developing a fiche to obtain IPA EU funds (twinning project) during the mission.

In order to place the new strategy of MAFRD and the activities of the mission in perspective, a few details on Kosovar agriculture are presented.

Kosovo is a small country, landlocked, in the middle of the Balkans. It has two main agri-ecological areas determined by climate, soils and vegetation, viz.

- a) The southwestern Dukagjini plain has a relatively mild, more Mediterranean climate and annual rainfall of 770 mm; the most common crops are alfalfa, maize, sugar beet, grapes and vegetables, all of which require irrigation during a large part of the year; and

---

<sup>3</sup> For an organogram of MAFRD see **Annex 1**, for a preliminary flow diagram on restructuring of the Field Advisory Services see **Annex 2**.

- b) The eastern part called Iber Lepenc, with a more continental climate and annual rainfall of 600 mm, also very dependent on irrigation. About 53 % of total area of Kosovo is used for agriculture, ca 41% for forestry land.

The present agricultural land use and livestock production are shown in **Table 1, page7 and , page 8.**

Kosovo became part of the former Republic of Yugoslavia in 1945. In Yugoslavia, agriculture and forestry were organized in the larger scale socialistic kolkhoz-type system. Some of the current agricultural institutes mentioned in this report had their roots in this system, with well trained staff and extensive facilities and research. Agriculture and also the Institutes suffered a severe set-back (sometimes to practical disappearance) during the war of 1998-1999. Facilities and equipment were demolished; ethnic Albanian staff was forced to leave their positions or the country. After 1999 a gradual build up has taken place of both agriculture and the institutes. Hindered however by the fragmentation of land (90% of farms have an average of only 2 ha of land), poor financial position, low salaries, brain drain and competition from neighboring countries, especially Macedonia, Turkey and Serbia, progress on rebuilding has been slow. Due to weak financial position and knowledge of farmers and poor functioning extension services, supporting laboratories of institutes and inspection services, quality in agriculture and agricultural products is poor and is not competitive in exports. Moreover also due to a weak inspection regime, basic material of lower quality can relatively easily enter the Kosovo agricultural system. This leads to many problems from pests and diseases, aggravated by lack of cultivation knowledge (e.g. soil preparation, pesticide usage) of farmers and a poorly functioning monitoring, surveying activity and information sharing from the governmental side. Moreover lab/advisory service and diagnoses are sometimes so poor that producers prefer to send samples and seek advice abroad. The situation is also deplorable in forestry for similar reasons, leading to increased occurrence of (untreated) pests and diseases. Deforestation (illegal wood cutting), fires, and neglect of forest stands also play a role.

To tackle these problems the new Department of Agriculture, Forestry and Rural Development (DAFRD, formed by the UNMIK administration in 2002)<sup>4</sup> launched and enforced the so called “Agricultural and Rural Development Plan for Kosovo” (ARDP) 2007-2013 at the end of 2006, with an update in 2009. The two main objectives of ARDP 2009-13 are to:

- a) Restructure Kosovo agri-rural sector in line with that of the EU, so that it can fulfill its obligations in this sector when it becomes a member of the EU; and
- b) Improve the standard of living of the rural population (including reducing poverty, where it exists): narrowing urban and rural disparities, providing increasing support to less favored areas, and narrowing disparities between Kosovo and the EU.

Some of the actions foreseen and described in the 2009-2013 ARDP are to:

- Create a framework for respective institutions (certification bodies, laboratories etc.) being recognized and operating across borders;
- Support this through consultancy, exchange visit to EU laboratories in the region (Bulgaria), and experience from Macedonia in the process of building a Food Safety Agency;
- Strengthen the Rozhaje Border Inspection Post (BIP);
- Develop cooperation between support services: veterinary, phytosanitary and agriculture extension;
- Improve disease control and phytosanitary controls; and

---

<sup>4</sup> The full Ministry (MAFRD) was established in February 2008 at the independence of the Republic of Kosovo.

- Share information intraregionally to prevent the spread of diseases of plants, animals and humans.

The ARDP therefore already clearly addressed many of the issues on strengthening the advisory services, inspection services and agricultural institutes described in this mission report. Moreover, another important objective in the ARDP is further harmonization with and eventual accession to the EU.

Much has already been achieved:

- Legislation is mostly in place and for a larger part harmonized with EU legislation (see for laws **Table 3, page 9**); and
- Institutes have partially restored and equipped, mainly with donor aid from USAID, the Italian Kos-Agri project (CIHEAM, Bari, Italy), Swiss InterCooperation, GIZ, and others.

However, there is still a severe lack of focus on applied research and diagnostic service to support agricultural advisory services; a lack of competent and adequately trained staff for labs (due in part to a weak education system in the Agricultural University); a lack of actual data on the occurrence of (quarantine) pests and diseases; and weak border inspection and registration/certification systems.

MAFRD framed this mission described in this report in order to enhance the generation and exchange of information through better cooperation between institute labs themselves; between the institutes and the agricultural advisors and inspectors; and between the institutes and the university. The results, when implemented, should lead to improved management, control (over institutions and over problems), and better inter-institutional coordination, and, therefore, better services to Kosovo farmers and a better competitiveness for Kosovo agriculture.

*Reports quoted and used for information:*

- World Bank. November 2007, “Integrating Environment into Agriculture and Forestry Progress and Prospects in Eastern Europe and Central Asia”. Volume II, KOSOVO Review, 13 pp.
- MAFRD (Ministry of Agriculture, Forestry, and Rural Development). 2009 (update of 2006), “Agricultural Master Plan Kosovo. The Rural Development Context of Kosovo: Agricultural and Rural Development Plan for Kosovo, 2007-2013” (ARDP), 326 pp.
- Kos-Agri Project. October 2010, “Strengthening the Kosovo MAFRD for the Improvement of the Fruits & Vegetables Production According to EU Standards (November 2010-October 2013).” Global Work Plan, CIHEAM, Bari, Italy, 77 pp.

<b>Table 1 – Agricultural Land Use in Kosovo, 2009<sup>4</sup></b>			
<b>Crops</b>	<b>Area (ha)</b>	<b>Production (tons)<sup>5</sup></b>	<b>Yield (t/ha)</b>
<b>Cereals</b>	<b>119,984</b>		
1. Wheat	77,938	271,373	3,616
2. Rye	394	834	2,360
3. Barley	1,642	5,121	2,835
4. Barley for beer	75	242	3,325
5. Oat	4,081	7,774	1,906
6. Maize	19,149	66,608	3,501
7. Maize/mixed crop	16,705	59,256	3,801
<b>Vegetables</b>	<b>15,837</b>		
8. Potato	3,376	58,678	19,062
9. Tomato	821	15,107	24,484
10. Eggplant	5	64	15,287
11. Pepper	2,955	46,669	18,009
12. Pumpkin	102	1,496	16,329
13. Pumpkin (mixed)	884	5,694	8,290

<sup>5</sup> Metric tons = 1,000 kilograms = 2,204 pounds.

**Table 1 – Agricultural Land Use in Kosovo, 2009<sup>4</sup>**

crop)			
14. Mushroom	1	6	10,000
15. Cucumber	316	7,199	37,030
16. Water melon	954	18,896	19,616
17. Melon	118	1,318	14,482
18. Cabbage	962	27,895	26,378
19. Cauliflower	12	218	17,848
20. Spinach	50	280	7,175
21. Lettuce	37	549	10,925
22. Beetroot	5	65	11,666
23. Parsley	8	52	6,860
24. Leek	62	814	15,142
25. Onion	798	8,697	12,633
26. Radish	3	18	7,016
27. Garlic	97	456	5,205
28. Bean	221	455	2,647
29. Bean (mixed crop)	3,891	6,684	2,485
30. Peas	33	80	2,951
31. Other leguminous crops	11	49	4,700
32. Carrots	43	352	11,160
<b>Fruits</b>	<b>5,096</b>		
<b>Fodder Crops</b>	<b>104,763</b>		
<b>Meadow</b>	<b>98,369</b>		
<b>Pasture</b>	<b>3,894</b>		
<b>Forestry</b>	<b>10,887 km<sup>2</sup></b>		

**Table 2 – Data on Livestock in Kosovo (2008)<sup>6</sup>**

Livestock products	Number of households	Average value/HH in euro	Total value in euro
Cattle (incl. 412 buffalo), 56% dairy cows, 1.07 dairy cow per household	341,608		
Pigs	26,770		
Sheep and goats	180,128		
Horses and donkeys	5,301		
Poultry	2,213,406		
beehives	43,297		
Meat	1,956	1,192	2, 33,355
Milk	16,720	1 256	20,995,562
Cheese	10,066	504	5,074,205
Fat (grease)	1,281	268	343,865
Other dairy products	4,581	323	1,480,329
Eggs	1,545	899	1,389,706
Honey	1,070	896	958,723
Other products	1,774	319	565,918
<b>Total</b>	<b>38 993</b>	<b>850</b>	<b>33 139 663</b>

<sup>6</sup> Source: MAFRD.

**Table 3 – Principal Kosovo Laws of Importance to the Activities Described in this Report<sup>4</sup>**

<b>Law</b>	<b>Status</b>
Law on agriculture inspection No. 03/L-029, promulgated by Decree No. DL065-2008 on 13 December 2008	In operation
Law on Protection of Plant Products, No. 03/L-042 07, promulgated by Decree No. DL-061-2008 on 27 November 2008	In operation
Law on Plant Protection in Kosovo, No. 02/L-95, promulgated by UNMIK Regulation 2007/6 on 31 January 2007	In amendment and now in procedure to be approved, in this law a list of quarantine organisms will be included
Law on Veterinary, No. 2004/21, promulgated by UNMIK Regulation No 2004/28 on 30 July 2004	In operation
Law on Genetically Modified Organisms, No. 03/L-028 (Passed first reading in the assembly on 29 February 2008)	In operation





## 2.0 OBJECTIVES OF THE MISSION AND ACTIVITIES DURING MISSION

This mission was part of a comprehensive situation analysis and information needs assessment started by **MAFRD in Kosovo, with the support of USAID/Kosovo through the New Opportunities for Agriculture Program (NOA)**, to support the development of the field extension capacity of MAFRD's Agricultural Advisory Services and strengthen and functionalize the agricultural institutes belonging to the Ministry of Agriculture, Fisheries and rural Development (MAFRD).<sup>7</sup>

The main aim of this activity of USAID is to realign agricultural institutes more closely to the Ministry's current extension strategy and priorities by:

- Holding the institutes responsible for delivering technology and technical (laboratory) services to the field advisory service agents, producers, agribusiness, MAFRD itself (plant/animal quarantine inspections, monitoring and surveying), and other potential clients such as university faculties.
- Requiring the institutes to concentrate on diagnostic services, applied research and demonstration in support of their main advisory and diagnostic roles.
- Integrating the Institute laboratories with the Advisory service into one organizational unit

The **overall objectives** of the mission, therefore, were:

- a) Assess the projected demand for laboratory and analytical services within MAFRD (including the new agricultural extension service), as well as among potential external clients;
- b) Identify the nature and scale of the analytical resources (technical and human) currently available among four institutes and related institutes outside MAFRD to meet that demand; and
- c) Develop an action plan and, if possible, an estimated budget for MAFRD's consideration and implementation.

The above mentioned objectives were achieved via the following **mission activities** in a three week visit (**January 16 to February 3, 2012**):

- **Review of current laboratories of MAFRD and of related institutions (such as Kosovo Food and Veterinary Agency (KFVA), the Faculty of Agriculture of the University of Pristina (FAUP), Institute of Public Health, Food Safety laboratories and some private laboratories;**
- **Interviews of target client groups:** farmers/growers, extension services, agri- and food businesses, KFVA, and FAUP; and
- **Meetings with MAFRD and donor officials** from Kos-Agri (Italian), EU, GIZ, NOA (USAID) and InterCooperation (Swiss).

---

<sup>7</sup> For an organogram of MAFRD see **Annex 1, page 45**, for a preliminary flow diagram on restructuring of the Field Advisory Services see **Annex 2, page 46**.

The mission was requested by Mr. Greg Vaut, Senior Technical Advisor to the Minister (MAFRD) via NOA and USAID, at the end of December 2011 and organized through the NOA central and regional Kosovo office (Mrs. Claudia LaLumia and Mr. Martin Wood, respectively) on short notice during the second half of January 2012. The terms of reference (**TOR**) for this mission can be found in **Annex 3, page 49**. An **itinerary with institutions visited and persons met** is provided in **Annex 4, page 51**.

During the mission full, **excellent and indispensable support** was received from Mr. Greg Vaut, ; Mrs. Nysrete Doda-Gashi, Advisor to the Minister for plant production and protection; Mr. Shaban Dreshaj, Chief of Advisory Services; and Mr. Behlul Behluli, Advisor to the Minister for Livestock Production. Moreover, the Directors of KIA, KFVA and IVE provided excellent support in providing data on their institutes. Detailed information on these institutes and the proposed reorganization/restructuring issues are presented in **Annex 5-7, pages 57, 65, 70**.

**The institutions involved in this analysis were:**

**Under MAFRD**

1. Kosovo Institute of Agriculture (**KIA**) at Peja
2. Institute for Viticulture and Enology (**IVE**) at Rahovec
3. Kosovo Forestry institute (**KFI**) included in the Kosovo Forestry Agency, Peja
4. Kosovo Centre for Livestock Breeding (**KCLB**) at Peja – now an association

**Under Prime Minister's Office**

5. Kosovo Food and Veterinary Agency (KFVA) laboratories in Pristina

**Under Ministry of Public Health**

6. Institute of Public health, Food safety Laboratories

**Under Ministry of Education**

7. Faculty of Agriculture, University of Pristina (**FAUP**)

**Private Laboratories**

8. Two laboratories were visited (see **Annex 3, page 49**)

Instead of giving extensive descriptions of the Institutes and laboratories involved, I present general and specific observations and recommendations for them in Chapter 5 and 6 that will result in the Activity Plan, presented in chapter 7.

Furthermore I provide **concrete proposal for changes in organization**, structure, staffing and necessary skills, equipment, and laboratory facilities (**summarized in the Organigram on page 27**) that are **not only conceptually attractive, but will actually (with the help and commitment of all stakeholders) be realizable in practice**, and which will give the laboratories and institutes sustainable potential to serve producers, advisors and the plant health inspectorate and thus serve agriculture and the national economy.

For that reason also **a number of stakeholders** (agribusinesses, processing industry, growers, the veterinary chamber, and donors) **were interviewed**. Their visions on the possible position and services of the institutes and laboratories have been taken into account in the preparation of this report. On the basis of information received it can be stated that **in the past years the Ministry Institutes, as well as some private laboratories seem to have lost credibility** due to **sometimes defective and even totally wrong diagnoses of problems and therefore failing remedies**. The consequence is that **clever private enterprises have learned to seek out more expert and reliable laboratories abroad** (Macedonia, Slovenia, other EU countries).

Fortunately this is still not a regular practice – so **time remains for a change to Kosovo national centers of excellence (government institutes and university)**. In general, stakeholders do not object to the introduction of (low) fees for laboratory services, so the time seems also ripe for such a (small) change, recognizing that the majority of Kosovo producers are smallholders (average 2ha) who cannot pay heavy fees from one day to another.

**Due to time limitations and first ideas on restructuring** presented in this report, I have, in agreement with Greg Vaut, **not prepared a draft budget. At this stage it is virtually impossible** to do so. Some details on the actual budgets of the institutes can be found in **Annex 5-7, pages 57, 35, 70.**

After this visit and report, **much work still has to be done** (e.g. detailed activity plan for each institute, budgeting) and a second mission filling in gaps and rendering the road map more concrete is therefore anticipated by USAID.



# 3.0 GENERAL OBSERVATIONS

1.1 **All institutes/laboratories** mentioned under Section 2 (**above**) are severely **understaffed** and **under budgeted** for their (new) roles. The infrastructure of the laboratories (except those of KFVA) are insufficient (especially in respect of laboratory quality, safety and quarantine).

*Note:* This situation leads to poor services to clients and isolated positions of institutes, also concerning serving the MAFRD policy department and inspection services with data from failing (field) diagnostic activities, monitoring and surveying

1.2 **The appointment and retention of trained and experienced staff is a severe problem** due to:

- **Weak education system** at Agricultural University, Pristina
- **Low salaries** under the national Civil Service salary structure (an MSc irrespective of years of service and experience earns ca 350 euro/month);
- **Lack of incentives** for the future (so-called trap-positions); and
- **Weak leadership.**

1.3 **Revenues of fee based testing** activities are **not (yet) available for institutes** and budgets and expenditures are apparently inflexible – timely procurement of consumable lab materials and competitive salaries are therefore impossible.

*Caution:* In case of an emergency **outbreak of a quarantine disease** this lack of flexibility in budgeting and spending would lead to **insufficient capacity to react** by the Government due to lack or too late arrival of consumable lab materials necessary for rapid and reliable diagnosis/identification procedures and response as well a shortage of trained staff to operate the necessary sophisticated equipment.

1.4 **FAUP poorly serves institutes:** departments often have only very basic facilities and equipment, are understaffed, and when suitable equipment is present, it is often not in operation.

*Note:* Although it is true (and a wise decision) that due to lack of sufficient academic staff and education means PhD students are sent abroad and educational programs are only for BSC and MSC levels, still these lower level programs should provide students with the necessary knowledge and skills to participate in state of the art scientific research methodology (applied and fundamental). The programs cannot do this adequately at present.

1.5 **In the other institutes new equipment was often found not or hardly in operation,** again due to lack of skilled staff and/or consumable constraints

1.6 **University professors opt sometimes for spending time doing routine testing for external clients:** this activity is far from the core business of the University and tends to distract faculty and staff from their teaching and fundamental research responsibilities – University professors also sometimes **operate private testing labs** ,and in this case compete unfairly with services provided by other institutes (public or private).

1.7 The effect of situations/activities mentioned under 1.2-1.6 is a **brain drain from the university and the institutes**

1.8 **Cooperation between the MAFRD institutes, with institutes of other Ministries and with FAUP is weak, absent or entangled in competence quarrels.**

1.9 **KIA analytic and seed departments, KFVA, the IVE enology and viticulture departments, and KCLB all have some skilled, motivated staff with dedication, vision and working hard, serving farmers and industry, though underpaid.**

*Note:* This dedicated staff is mainly responsible for the (little) credibility that remains for the laboratories

1.10 The institutes (except KFVA and IPH labs) have **very little awareness of harmonization with EU regulations** (Directives), EU standard methods **and quarantine** (in general and quarantine regulations in laboratories and for control purposes). Furthermore the **notions** of a position as **national reference Laboratory (NRL) for Plant Health, of lab quality; and required safety systems**, participation in **ring tests and proficiency tests was virtually absent in all institutes** (except for KFVA).

*Note:* This leads to a very poor protection against quarantine pests and diseases at the borders and a totally deficient knowledge on the (possible) occurrence and distribution of those pests and diseases in Kosovo.

**Monitoring and survey activities** on (quarantine) pests and diseases as well as **pest risk analysis (PRA) are absent or are performed only at a very limited level**, (except KFVA) and no or few samples from border export- and import inspections are analyzed. This is to a large extent caused by the lack of awareness and by the absence of sufficient expert staff and/or testing facilities and procedures in the responsible institute laboratories.

*Note:* This leads to a very poor protection against quarantine pests and diseases at the borders and a totally deficient knowledge on the (possible) occurrence and distribution of those pests and diseases in Kosovo.

1.11 Both veterinary and phytosanitary inspectors are placed in a department under KFVA. **Especially phytosanitary inspectors (but is true also for veterinary inspectors) have lost their functional basis with present policy, plant production and protection and livestock department of MAFRD** (those 3 departments will soon be reorganized in one unit). This is like present placement of KFVA under Prime Minister Office **technically undesirable** (see below). Inspectors have no chief inspector and generate no to little samples from their inspections (see above). They and the policy department of MAFRD are **poorly or not at all represented in international plant health organizations/working groups/meetings** such as EPPO and ISTA

*Note:* The tasks of a national, governmental animal and plant health body are to protect the national animal and plant resources and their health via inspection programs at the border during in- and export activities and inside the country during the production and processing stage. This animal, plant and agricultural industry protection is reached by

- Prevention of new pests and diseases and invasive plants from entering the territory
- Monitoring and surveying (quarantine) pests and diseases and taking control/eradication/prevention actions when those pest and diseases are diagnosed
- Solving/managing trade issues which may arise in the field of animal and plant health, including Phytosanitary and veterinary trade barriers
- Protecting and preserving valuable plant and animal natural resources in nature areas
- Protecting the population from risks of zoonoses

1.12 **Institute are not (yet) accredited for ISO 17025, 9000 or ISTA**

*Note:* In the EU, but also internationally there is a strong tendency for (statutory) laboratories to become (partly) accredited for critical (routine) diagnostic and other testing services. The usual official bodies granting accreditation are National Accreditation Bodies recognized by the Government (ISO accreditation), International Seed testing association (ISTA). Through accreditation a quality system (and at the same time often also safety and quarantine systems) is put into place. Many EU laboratories are now (partly) ISO and also ISTA accredited. Benefits are a better management structure of the laboratory, improvement of equipment use and test results through calibration and use of control samples, better training of staff, and more efficient staff. Part of accreditation is also validation/harmonization of methods used in (EU) laboratories and performance of ring tests and proficiency tests to check the reliability of methods and of the tests performed by a certain laboratory. Accreditation and validation standards are also part of the activities of EPPO. Furthermore the use and maintenance of checked reference collections/materials. **For requirements of a National Reference Laboratory, see page 31.**

- 1.13 Institutes **have no, very little, or still insufficient investments, skills and equipment in state of the art molecular detection and identification methods required for good laboratory analyses and which** have become common practice in EU (statutory) laboratories - both in veterinary and plant health.

*Note:* In most EU laboratories molecular methods such as polymerase chain reaction (PCR) and its modern version real-time PCR, in-situ hybridization and sequencing have been implemented for routine diagnosis of many (quarantine) pest and diseases already for many years now. More and more methods are validated and incorporated in EPPO and EU standard protocols and Control Directives. When Kosovo wants to harmonize with the EU (taken into consideration what has been stated under 1.12) rapid introduction and establishment of those molecular methods is a prerequisite.

# 4.0 SPECIFIC OBSERVATIONS

## 1.1 Kosovo Institute of Agriculture (KIA)

- KIA in its present form came into operation in 2010 with donor assistance of Kos-Agri, KFOR, EAR, ILVO-Belgium, and the Faculty of Agriculture and Environment of the University of Tirana, Albania.
- The **analytic laboratory** department is reasonably **well equipped** for soil and pesticide analysis and is **active** (3,500 samples/year), **There are much lower levels of activity in the other KIA departments**
- Capacity (lab space and equipment) for soil, water and unprocessed food testing is sufficient
- **Capacity for seed testing and especially plant health is insufficient** (staff, equipment, and facilities). At present, there is only a phytopathology department (performing some very basic mycology and a little bacteriology) and no activities in the important field of virology,
- **Functionality warrants positioning as NRL, but:**
  - There are **no quarantine facilities** (labs, phytotrons, greenhouse) and **no reference collections** of quarantine organisms
  - Moreover there is very **little or no quality and lab safety system in place and the laboratories have no accreditation** (ISO 17025 and ISTA)
  - **Refurbishment of labs is (for staff safety and NRL function) mandatory and should be marked as a Ministerial responsibility, using its (increased) capital investment budget**

*Note:* see the detailed **analysis of this situation in the Kos-Agri project** report "Strengthening the Kosovo MAFRD for the improvement of the fruits & vegetables production according to EU Standards", Global Work Plan 2010, and project report 2011). Although refurbishment, equipping and staffing support for KIA is foreseen by the Kos-Agri project this has yet to be realized and progress should not be depend on the donor at all.

- The institute laboratories are severely understaffed, present staff is insufficiently educated/trained and severely under paid

## 1.2 Kosovo Food and Veterinary Agency (KFVA), Food and Veterinary Laboratories

- **KFVA** has been placed in 2010 **under the Prime Minister's Office. This is technically** (livestock, veterinary quarantine in MAFRD) **undesirable** and is a principal **source/client detachment**

*Note:* Governmental veterinary laboratories or veterinary agencies are usually placed under the Ministry that deals with Agriculture, Food and Rural Issues, also true for those leading EU countries such as UK, Germany and France.



- KFVA laboratories were new built and came into first operation in 2001 and are **excellent facilities. They can work with quarantine/high containment and the KFVA labs can function as a NRL**
- The **milk quality testing and serology** are **well organized and active**
- The **molecular diagnostic department is well equipped, but severely understaffed** (1 academic for all monitoring PCR tests of brucellosis, avian flu and rabies!); this situation is also severe problem for other diagnostic departments.
- At present KFVA has **not yet implemented testing of trichina in pork**
- Samples from farmers and vaccinations are still analyzed free of charge
- **Quality systems/lab safety/quarantine systems are implemented to a certain extent**, but also according to KFVA's own assessment not yet sufficiently. A quality manager is being recruited.
- **The KFVA laboratories have no internationally accepted accreditations as of yet.**

### 1.3 **Kosovo Center for Livestock Breeding (Cattle Insemination Station, KCLB)**

- This insemination station was created with Italian donor support in 2008. The project ended 31 December 2011.
- KCLB has few (2), but very active, staff with vision and dedication. The station produced 34,000 doses of semen (sold at 2 euro per dose) and has become just self-supporting at an operating level.
- **Project deliverables** by the donor were apparently **only partly realized** - no (feed) storage facility or calf housing, and only 3 of the originally promised 10 bulls were donated.
- In **December 2011 KCLB was handed over to MAFRD**, but **under the condition** that it should **continue as an NGO** (association of veterinarians, technicians and farmers) for at least 5 years. Therefore the **position of KCLB and staff** has become **now very unclear**. The present Director of KCLB (veterinarian professor) is also chairing the association and has to prepare contracts for himself and his staff
- The three bulls are now 2-3 years old and will soon be too old; moreover the genetic basis is (too) small. There is no budget foreseen to replace the existing bulls or expand the herd. It is unclear what happened to the original donor budget for this project.
- There are **insufficient facilities for quality testing** of semen (especially regarding diseases)
- There is too **strong competition from imported semen** (imported at 1 euro per dose)
- At the moment there are **no other clear tasks foreseen** for KCLB, and it has **no facilities to increase production or to promote its products and services**. Consumables will be provided for only 4 months after termination of the project, April 2012

### 1.4 **Institute for Viticulture and Enology (IVE)**

- The institute has good laboratory facilities and equipment, created with donor help from GIZ, Germany since 2007 and in full operation since 2010 in the center of wine production (and vegetable production)
- The **second level management** of viticulture and enology is **very active, with vision**, but is overloaded with work. Understaffing is a problem here also
- **Infrastructure and equipment are sufficient**, even if the number of basic wine tests or samples increases
- **IVE has become a regional expertise center** and routine lab (also for organoleptic analyses) and clearly **serves the growers and wine industry**
- There is , however, a **lack of field (diagnostic) expertise** for **(quarantine) diseases and pests** in grape production (especially concerning disease diagnosis and pesticide usage) **and cultivation (soil preparation)** - this, by the way, is **also true for vegetable sector** in the same region (the heart of vegetable production in Kosovo)
- There is no weather station facility for accurate disease development prognosis or irrigation need planning in the region
- The institute has a really **excellent functional land registration system** created, with donor funds, **which could find wider use in the country for other crops.**
- The institute and grape production area need mother plant and demonstration (varietal) plots. The Kos-Agri project has foreseen this need, but it is unclear what their actual plans are.
- **At present**, there is **no wine testing laboratory responsible** (person in place recently suspended) – leading to **frustrated clients and work overload** for not fully competent other staff.

#### 1.5 Kosovo Forestry Agency, Forestry Institute (KFI)

- The Forestry Institute has a history as a very functional Institute since the 1940's up to the 1999 war when it was largely dismantled. At present it has only limited staff and facilities. All lab functions disappeared and the present locality is small and has only possibilities for some lab activity in the cellar.
- At present **the institute has no laboratories** and a **poor infrastructure**
- The **present management promoted ideas of copying KIA testing facilities**, such as soil and pesticide (residue) testing because of the importance of forestry (41% of land use in Kosovo)
- At present the **production of planting material** is KFI's **most important activity**
- Furthermore the Institute **maintains varietal demonstration and mother plant plots**
- There is **no systematic survey or monitoring activity for pests and diseases** and little knowledge on the topics. Forest inspectors mainly deal with illegal logging and not with phytosanitary matters and inspections.
- There is **no awareness of the need for or importance of harmonization with EU and/or quarantine**



Figure 1 – Visit to Kosovo Institute of Agriculture (KIA), Peja. Analytical laboratory (soil analysis, pesticides)



Figure 2 – Visit to KIA, phytopathology/bacteriology laboratory (pesticides)



Figure 3 – Visit to Kosovo Center for Livestock Breeding (KCLB), Peja



Figure 4 – Visit to KCLB, insemination laboratory



Figure 5 – Visit to Institute for Viticulture and Enology (IVE), Rahovec. Wine testing laboratory



Figure 6 – Visit to IVE. Organoleptic laboratory



Figure 7 – Visit to Kosovo Food and Veterinary Agency, Pristina. Microbiological laboratory



Figure 8 – Visit to KFVA, Pristina. Serological Laboratory



Figure 9 – Visit to Faculty of Agriculture, University of Pristina (FAUP), Pristina. Microbiology Laboratory



Figure 10 – Visit to FAUP. Chemistry Laboratory



Figure 11 – Visit to fruit grower, Peja. Grafting of fruit trees.



Figure 12 – Visit to Vegetable producer, Peja. Storage of cabbage and onion.

# 5.0 GENERAL RECOMMENDATIONS

**Key** to the general recommendations is a proposed **repositioning and reorganization concept shown in Figures 13–15, below** that was developed after intensive discussions with the Minister, deputy Minister, State Secretary, senior advisors to the Minister and representatives of the Institutes.

1. The fundamental proposal is to **reposition and reorganize the MAFRD institute** and preferably **also KFVA laboratories**, together with reorganized field advisory service in a new **Advisory and Technical (lab) Services Directorate (ATSD) of MAFRD**. The senior staff of this Directorate will manage and determine the operational policies both for the Field Advisory service new style and the laboratory cluster, in this way creating optimal operation conditions and cooperation (between them and with stakeholders). This restructuring and repositioning is in line with the Ministerial policy mentioned in Chapter 2, namely:

‘Greater responsibility to **deliver technology and technical (laboratory) services to field advisory service, to producers, to MAFRD itself (plant/animal quarantine inspections, monitoring and surveying) and to (potential) other clients such as university faculties**’.

Included in this proposal is **positioning of KFVA and KIA as National Reference Laboratories (NRLs) and as Expert Diagnostic Labs for complex samples** that cannot be dealt with by other labs such as IVE, KFI, and KCLB. In this way as for the field advisors and the inspectors below **a sample stream** will be generated creating increasing mutual knowledge and cooperation. **IVE and KFI should develop a strong field diagnostic expertise and generate samples and have the mutual benefit as well, but can rely on KIA for more complex analyses**

**The before- and after-restructuring reporting relationships for the institutes discussed in this report are shown in Figure 1, page 24.**

In this proposal is further proposed a **repositioning of inspectors under a Chief Inspector as a separate unit in close connection to the MAFRD Policy Department**. The Policy Department would be responsible for **producing their instructions and guidelines** (for sampling, monitoring, surveying, inspection), both for veterinary (livestock) and plant health (production) matters. Once properly instructed and trained the **inspectors will generate samples for the reference laboratories, and mutual knowledge on (distribution) of quarantine pests and diseases will be generated, disseminated and maintained.**

It is advisable to **speed up the process of repositioning and restructuring of the Advisory Service new style, the Laboratories and the Plant Health inspectorate, positioning as KIA and KFVA as NRL’s, and harmonization with the EU legislation, requirements, quarantine (Directives) and laboratory standards with an EU twinning project.**<sup>8</sup>

Finally, it is advised to **place KCLB under KFVA or more directly under MAFRD** until it is clearer if this institute is competitive or has to be phased out.

MAFRD has lead responsibility for the repositioning and restructuring. This is reflected also

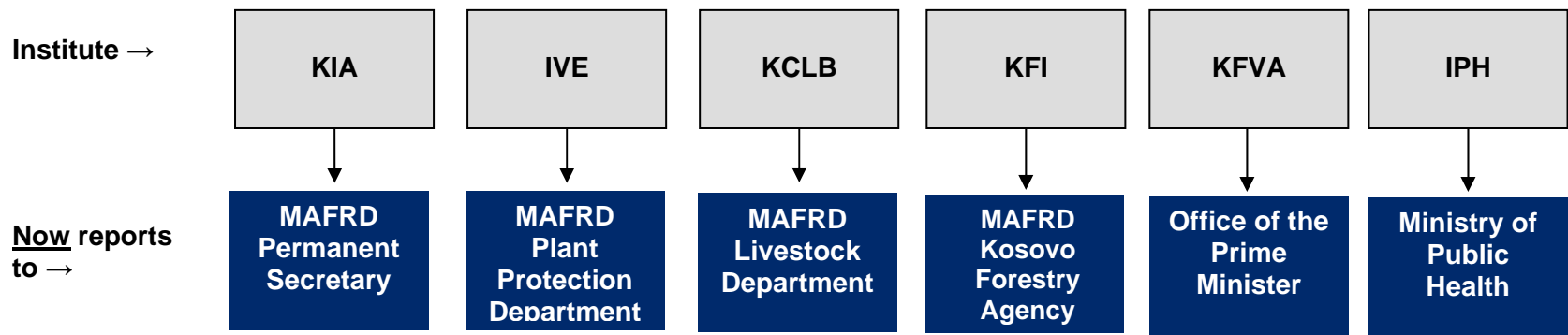
---

<sup>8</sup> **During the mission, assistance was provided to MAFRD to prepare a fiche** for a Twinning Project on these matters for submission to the resident European Commission Liaison Office (ECLLO).

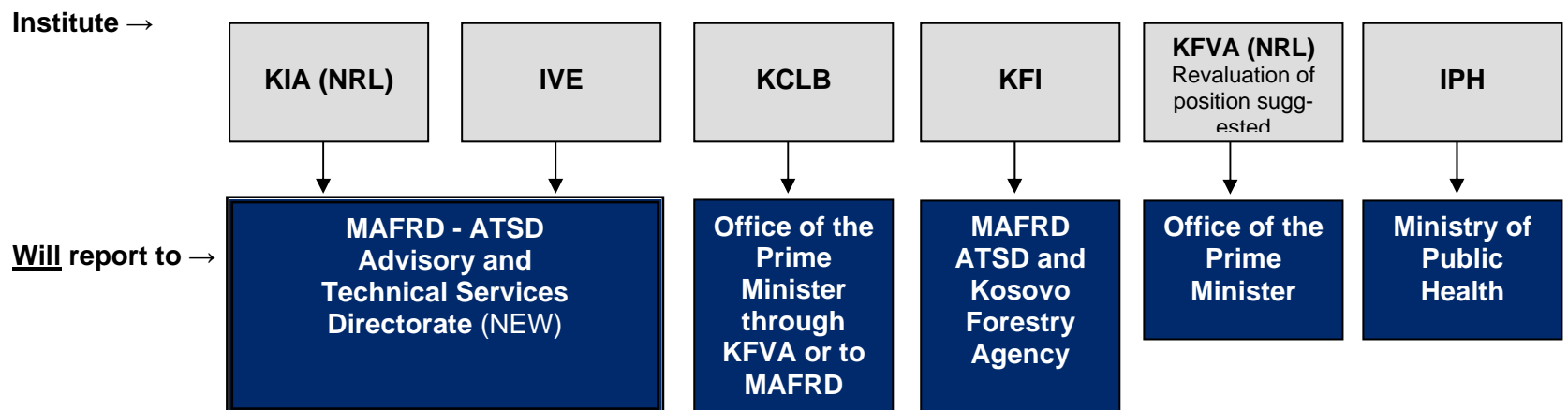
in an indicative **activity plan** (Table 5, **page 37**) for a period of 3 years.

**Figure 1. Institute Reporting Relationships Before and After Proposed Restructuring**

**BEFORE PROPOSED RESTRUCTURING**



**AFTER PROPOSED RESTRUCTURING**



2. In their reorganization, the Institutes should ensure that they **concentrate on:**
  - **The function of national reference laboratory (for KIA and KFVA).** IVE and FI should focus mainly on field diagnostic expertise, sending complex samples to KIA, per discipline (bacteriology, virology, nematology, parasitology, zoonoses, mycology, entomology and molecular methods)
  - **Applied research to support their diagnostic activities and to respond to problems occurring in practice** and as identified by the field advisory service, inspectors and/or growers themselves
  - KIA and KFVA should also focus on **pest risk assessment and monitoring and surveying** as NRLs while IVE and KFI focus on quality diseases in grape/vegetable production and forestry, respectively, in order to get a better grip on pest/disease status and control in these fields.
  - **Testing of unprocessed plant and animal products, soil, irrigation water**
  - **Training** of field advisors, veterinarians, producers, and students of FAUP

2.1 This means that all institutes involved have to

- **Replace/add competent, well trained staff in the neglected fields** of plant health and molecular identification/diagnosis and training, and
- Redirect and reinstruct their staff.

This will demand improved management skills that can effectively address the urgent need for change in the directions indicated under 5.2 and the vision to what the real needs (restructuring/new build, equipment, staff) will be.

3. Institutes should leave **testing of processed animal and plant food products to IPH. This will end competence issues between MAFRD and Institute of Public Health (IPH) and open the way to a fruitful cooperation in the near future.** IPH laboratories are advanced in matters of quality assurance and operation of certain modern methods and during my visit to IPH a will to cooperate was clearly expressed.
4. **FAUP should concentrate on pure and applied research and training** to feed institutes with qualified staff. It should not perform routine testing. This will end competition issues with institutes, distraction of faculty from the core business (education and research) of the University and will lead to mutual increase in knowledge, fruitful cooperation and creation of new, competent researchers that can serve their country's agriculture in university, applied institutes and advisory services
5. **ATSD senior staff stimulates and facilitates cooperation and servicing between/of** the different agencies/**laboratories** of their directorate and other Ministries, **main partner (field extension services)** and other stakeholders  
*Note:* ATSD senior staff will have an overall coordination function and can dictate (in close coordination and under supervision from Minister and MAFRD policy department) the type and extent of services that have to be provided by the laboratories to stakeholders and demand services from stakeholders (samples, monitoring and survey plans). Furthermore they will supervise and coordinate staffing and positioning and training of staff.
6. **KIA and KFVA should serve other institutes with complex (diagnostic) tests and as National Reference Laboratories (NRLs).** They should keep reference material, deal with quarantine and perform/coordinate monitoring and survey programs
7. **All labs should apply for (partial) accreditation according to ISO 17025 and KIA also for ISTA**

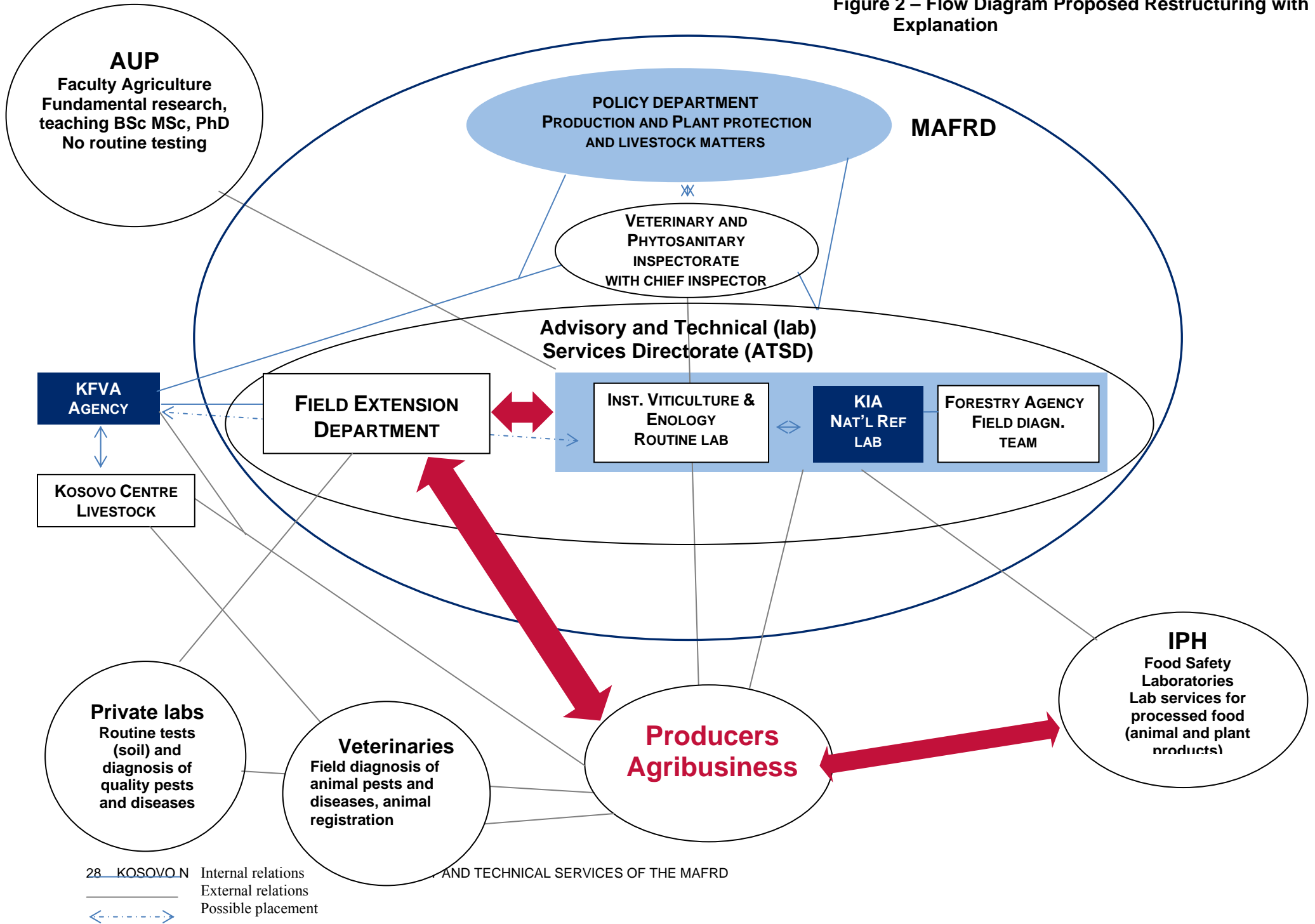


8. **When statutory tests** (official tests for presence or absence of quarantine pests/diseases/organisms) **are eventually delegated to private labs**, NRL's should **supervise and audit** these certified labs.
9. Veterinary and Phytosanitary inspectors are proposed to be reorganized into a new **Inspectorate with a Chief Inspector, directed through Inspection Instructions, but separate from** the Policy Department of MAFRD, **servicing import and export inspections and monitoring and survey programs (in close cooperation with ATSD, especially the NRL's)**
10. **IVE** should serve as an **expert center** for the wine industry and enology providing **advice, land registry and basic quality testing and disease diagnosis and prognosis** (weather station) for the industry. A **strong regional advisory team** specialized in field diagnosis and cultivation practice **shall be created at IVE. Complex samples should be sent to KIA**
11. **KFI** should develop a **strong, six people, field diagnostic forestry team** (entomologist, mycologist, and nematologist, each with assistant) **with a basic diagnostic lab facility in the institute. Complex samples should be sent to KIA**
12. **Place KCLB temporarily under KFVA or more directly under MAFRD till redirected or phased out due to non-competitiveness with imported semen and lack of sufficient/too old genetic material (bulls)**
13. **Prioritize** the update of **Diagnostic (quarantine) facilities**, especially KIA but also KFVA and appoint **at least one expert and assistant for each diagnostic discipline and for molecular biology**
14. **Urge FAUP to focus on quality education and provide (internationally) trained, competent staff**
15. **For services/tests that were free of charge ask for a symbolic fee of 1-2 euro**, to be doubled every 1-2 years. Generally stakeholders appeared to be in favor of such a system, as became clear during the interviews with them
16. **Revenues** of testing and other activities of the Institutes should be **retained by the Institutes or MAFRD** should give **greater flexibility** in expenditures and budgeting **for timely procurement of consumables, equipment and more competitive salaries<sup>9</sup> (taking into account civil servant benefits)**

---

<sup>9</sup> Competitive with private sector service providers and/or academic faculty.

Figure 2 – Flow Diagram Proposed Restructuring with Explanation



1. **Kosovo Food and Veterinary Agency (KFVA) laboratories (also for veterinary matters)** – Handling of samples from survey, monitoring activities of veterinary inspectors and diagnosis of veterinary (quarantine) pests and diseases and food safety - analysis of unprocessed animal products (incl. imported and exported animals and products). Samples are also received directly from veterinarians, advisors, producers, other institutions or own activities. Very complex samples should go to FAUP. Sample results should be communicated to sender as soon as final diagnosis/analysis is made. Responsibilities should include Pest Risk Assessment (PRA) and maintenance of collections of reference materials (cultures, animals). KFVA should provide practical training to vets, inspectors and advisors. At present, KFVA is outside the ATSD (under Prime Minister's office) positioning it under ATSD is technically more logical and therefore desirable eventually. Then, KFVA would become a key element of the technical support to Field Advisory Service extension agents on animal health and related issues.
2. **Kosovo Institute for Agriculture (KIA) laboratories (also NRL for phytosanitary matters)** – Handling of samples from survey, monitoring activities of phytosanitary inspectors and diagnosis of phytosanitary (quarantine) pests and diseases and food safety; analysis of unprocessed animal products and animal feed, seeds, soil and water testing, feed ingredients (including imported and exported plants and products. Samples will also be received directly from advisors, producers, and other institutions or own activities (e.g., IVE and KFI). Very complex samples can (in future when their laboratories have updated) be sent to FAUP. Sample results must be communicated to sender as soon as final diagnosis/analysis is made. Weather station(s). PRA. Maintain reference material (cultures, mother plant field and greenhouse plots and demonstration (varietal) plots. Training inspectors and advisors.
3. **Institute for Viticulture and Enology (IVE) with wine and grape testing laboratory** – Serves both the wine industry and grape producers (both wine and table grapes); basic wine and grape testing, land registry system, weather station, and specialized advisors in region. Complex samples to KIA (for sampling see under 6). Sampling for KIA by specialized advisors during extension activities in the field or upon request by producers. Maintain mother plant and demonstration (varietal) plots. Training advisors.
4. **Kosovo Forestry Agency with Forestry Institute (KFI)** – field diagnosis of forestry (quarantine) pests and diseases, complex samples to KIA (for sampling see under 7). Samples from survey, monitoring activities of forestry inspectors, during extension activities in the field or upon request by producers. Sample results communicated to senders as soon as final diagnosis/analysis is made. Maintain mother plant and demonstration (varietal) plots.
5. **Field Extension Department**– specialized and general advisors: field diagnosis, cultivation advice, complex samples to KFVA and KIA (for sampling see under, training producers, specialized teams for vegetables, fruits and grape production. Headed by Chief Advisor with secretariat, reporting to ATSD head, MAFRD Policy department and stakeholders
6. **Technical (laboratory) Services Department**- contains all depicted laboratories, headed by Department head and secretariat, coordinating cooperation between the different laboratories and reporting to ATSD head, MAFRD Policy department and stakeholders
7. **Inspectorate -Phytosanitary Inspectors** – in the event of suspect symptoms or when testing for symptomless latent infections has to take place, the inspectors will take samples and send them to KIA for laboratory analysis following best practices. Sampling at a) border/boundary inspection points and designated/licensed bonded areas and b) during surveying and monitoring in the field. Execute their work in close cooperation and supervision from policy, livestock and plant protection and production department of MAFRD, where also monitoring and surveying plans are developed in close cooperation with KIA and KFVA.
8. **Inspectorate – Veterinary Inspectors**, when veterinary inspectors at border inspection points have doubts after presumptive diagnosis, using their basic diagnostic facilities for

sampling of routine samples, they should send samples to KFVA as described under 5 under adequate veterinary sample handling conditions

9. **Inspectorate – Forestry Inspectors.** Control forest activities in both public and private forests, not only for illegal wood cut, fire, etc., but also health status and occurrence of (quarantine) pests and diseases. Will report to KFA and ATSD
10. **University of Pristina, Faculty of Agriculture (FAUP) Scientific Departments** – Execute fundamental and applied research to educate BSc, MSc and PhD students in Agricultural Sciences to feed agencies and laboratories with appropriate information and scientist that can handle state of the art diagnostic methods and equipment and perform applied research to further develop agriculture in Kosovo, and provide diagnosis/identification of very complex samples or organisms. University Departments do not perform routine diagnosis, nor stimulate University professors to start private routine diagnostic laboratories as a second activity.
11. **Institute of Public Health (IPH) Testing Laboratories** – testing of all processed food products for food safety, with information to and in cooperation with MAFRD Policy Dept. and ATSD. Samples via advisors, inspectors or directly by producers
12. **Veterinarians:** as under 8
13. **Private labs** – can provide routine analysis (environment, soil, plants) and diagnostic services for quality diseases/pests only. Statutory activities for KFVA and KIA. National Accreditation Body can ask for auditors from KFVA and KIA in their process of certification of private labs
14. **Producers** (growers, farmers, private agricultural enterprises, processing industry, etc.)– First line education and development and support by field advisors and veterinarians. Can directly ask advice and send samples to KIA and KFVA can also be trained by them. In principle no direct contact with FAUP.

# 6.0 CRITERIA FOR A NATIONAL REFERENCE LABORATORY

- A mandate to serve reference functions in the public health/veterinary/phytosanitary microbiology sector, in accordance with the country's system and the relevant authorizing body/bodies.
- Recognition as an expert institution and strong key partner in connections with laboratories and stakeholders within Member States and internationally.
- Sufficient knowledge and application, where appropriate, of international standards and practices.
- Suitable equipment, basic materials, adequate resources, appropriate products and sufficient time to be able to perform functions and activities assigned to the laboratory.
- An appropriate infrastructure (i.e. building and administrative infrastructure) to support activities. With regard to the infrastructure of the building, this goes beyond equipment and materials and includes specialized laboratory containment facilities and biosafety management systems for working with certain (quarantine) pathogens.
- Suitably qualified staff with adequate training and experience, such as to ensure a sufficient level of competence to carry out the assigned tasks.
- Compliance with laws concerning data protection, transportation and material transfer agreements.
- Sufficient funding that supports and guarantees continuous and qualified work.

In other words:

- State of the art diagnosis in suitable diagnostic (quarantine) facilities, where applicable in accordance with international standards
- Responsible for confirmation of new (quarantine) pest/disease in the country and direct and obligatory information to MAFRD
- Assistance in or execution of final diagnosis for other laboratories
- Provision of background (bibliographic) material
- Establishment of new standards in diagnosis in an (inter)national setting
- Training provision for other labs
- Organizing and/or taking part in ring tests and proficiency tests

- Supply and storage of **reference material** (defined cultures of microorganisms or preparations of viruses or plant/animal material containing those that are used as controls in validated test methods)
- Exchange of experience in (international) working groups of labs

# 7.0 SPECIFIC RECOMMENDATIONS AND ACTIVITIES PROPOSED<sup>10</sup>

## 7.1 KIA

1. **Position KIA as a National Reference Laboratory for plant health.** For the criteria for an NRL, see **page 31**.
2. **Install missing diagnostic disciplines** Virology, Entomology, Nematology, Bacteriology and possibly Herbology/Non-parasitic disorders and especially also a **Molecular Biology** departments, Appoint sufficient qualified staff, i.e. at least one senior expert with a technician for each discipline/department, as well as a quality manager. Construct or refurbish appropriate laboratories, containment facilities (see also 7.5), and procure the necessary equipment\* and consumables (**11 extra staff, see Table 4**). Use Kos-Agri support already committed and pursue Twinning project for additional support.
3. Specialists should **start collections of reference material** (see under criteria for NRL, **page 31**).
4. **Incorporate knowledge on forest pathogens and pests**, via training abroad of entomologist and mycologist to adequately support the KFI.
5. **Evaluate if Departments of Enology/Viticulture and Forestry** (also foreseen under new organigram) **have to be maintained/reduced** when their tasks are also executed by IVE, resp. KFI.
6. **Build quarantine facilities** by refurbishing labs and **greenhouse/growth cabinet** and provide **proper waste water disposal** and install **quality and safety systems**. Use **Kos-Agri project to support this**.
7. **Harmonize testing procedures with EU Directives (and included standard testing methods) and EPPO** diagnostic protocols and methods.
8. Specialists should **become member of international working groups/expert panels** (e.g. EPPO, ISTA)
9. **Perform Pest Risk analyses (PRA)** when harmonizing national and EU/EPPO lists of quarantine organisms.

*Note:* Pest risk analysis according to the IPPC as "the process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it". The EPPO Guidelines on pest risk analysis provide a detailed guide for the analysis of risk from individual pests for a defined area, in relation to their potential status as quarantine pests or regulated non-quarantine pests.

---

<sup>10</sup> Slightly more detailed recommendations on activities can be found in descriptions of Institutes KIA, KFVA and IVE in Annexes 4a-c.

PRA is an activity of National Plant Protection Organizations, as they are responsible for the establishment of phytosanitary regulations and the application of phytosanitary measures in line with IPPC's measure ISPM no. 1 (Plant quarantine principles as related to international trade) and ISPM no. 2 (Guidelines for pest risk analysis). (further see <http://archives.eppo.org/EPPOStandards/pr.htm>).

10. **Execute survey and monitoring for harmful (quarantine) organisms and test samples from in- and export** in close cooperation with inspectorate.
11. **Concentrate on routine testing of soil, irrigation water and unprocessed plants and plant and vegetal food products (including analyses for presence of heavy metals).** Leave other samples (specifically, processed food products for direct human consumption) for analyses by IPH.
12. **Develop and maintain mother plant plots and varietal demonstration plots** for all crops **except grape (grape variety collection to be located at IVE).**
13. **Train** (new) field extension staff, farmers and private sector extensionists (via the Field Extension Service), inspectors, and students of FAUP (in the latter case via internships).
14. Have KIA's own staff trained nationally and internationally, within the framework of an eventual twinning project and through other donor supported programs.
15. Start **acquiring accreditation (ISO 17025 and ISTA) and appoint quality manager.**

## **7.2 KFVA**

16. Position KFVA laboratory as a National **Reference Laboratory for animal health.** For criteria, see Chapter 6.
17. **Preferably reposition KFVA under MAFRD.**
18. **Outsource veterinary and phytosanitary inspectors to new Inspectorate** with chief inspector (see General Recommendations).
19. **Concentrate on diagnosis of veterinary pests and diseases and testing of unprocessed animal products.**
20. Leave processed animal products to IPH.
21. Appoint at least one more competent senior expert and 2 technicians in the molecular/serological department and other departments where understaffing occurs. Foreseen **extra staff: at least 4 academics and 4 assistants** (see **Table 4, page 36**).
22. Concentrate on **further harmonization with EU regulations** and standard diagnostic methods (including **introducing regular testing of trichina in pork**).
23. **Train** advisors, inspectors, veterinarians, farmers and students.
24. Start **acquiring accreditation (ISO 17025) and appoint quality manager.**

## **7.3 IVE**

25. Further **position IVE** and its laboratory **as a regional, specialized routine center and lab.** Extend number of types of basic tests and the number of tests.
26. **Appoint competent laboratory manager and assistant** as soon as possible as well as senior expert and one assistant specialized in field and basic laboratory diagnostics for grapes (and eventually vegetables) and in grape/vegetable cultivation (**4 extra staff**).



27. **Establish field diagnostic expertise** together with new Field Advisory Service Team (at least two experts) and install and **operate a weather station** for disease and irrigation prognosis.
28. **Concentrate on basic wine and grapevine testing:** leave **complex** diagnostic, environmental and soil **samples for KIA.**
29. **Maintain and extend land registration system to other crops.**
30. Develop a **monitoring and survey program for (quarantine) pests and diseases in grapevine and eventually for vegetables (because of the importance of the Rahovec area (50 km radius) to national vegetable production)**
31. Further **harmonize with EU regulations** e.g. COUNCIL REGULATION (EC) No 491/2009.
32. **Train** advisors, inspectors, growers and wine producers.
33. Start acquiring accreditation (ISO 17025) and appoint quality manager.

#### **7.4 KCLB**

34. Reposition under KFVA or possibly preferably under MAFRD. This will solve the uncertain 'floating' present position of the Laboratory.
35. After repositioning investigate together with KFVA and stakeholders sustainability of the laboratory as soon as possible.

*Note:* No detailed description of KCLB will be provided at this stage.

#### **7.5 KFI**

36. The Forestry Institute should concentrate on field diagnostics (forest health) and provision of planting material and report to both KVA and ATSD (to ATSD especially for pest and disease status, diagnostic testing, relations with KIA).
37. Formation of an expert field diagnostic team (senior expert entomologist, mycologist, nematologist, each with one assistant, **6 extra staff** (see **Table 4, page 36**) to monitor and survey disease problems in forests.
38. Facilitate KFI field diagnostic team with basic diagnostic lab for simple diagnostic observations/quick tests.
39. Send complex diagnostic samples and soil/environmental samples to KIA rather than adding duplicate facilities at KFI.
40. Develop and maintain mother plant plots and varietal demonstration plots for forest trees.
41. Concentrate on development of field expertise to be transferred to advisors, forest inspectors and private forest owners.
42. Provision of training for forest inspectors, advisors and private forest owners.

**Table 4 – Proposal for number of qualified staff to be appointed as foreseen in reorganization/restructuring**

Organizational unit	Senior staff		Assistant	
	number	position	number	position
New Advisory and Technical Services Directorate		To be determined		To be determined
New Inspectorate with Chief inspector		To be determined		To be determined
KIA	6	Quality manager, diagnostician for bacteriology, virology, entomology, nematology and herbology	5	Assistant for bacteriology, nematology, virology, mycology, entomology
KFVA		To be determined		To be determined
IVE	2	Expert for pest and diseases in grape and for cultivation of grape	2	
KVI	3	3	3	
KCLB		To be determined		To be determined
Reorganised Advisory Service	8	Team for specialized in pest and diseases and cultivation of grape and vegetables at Rahovec, similar teams for vegetables and fruit at Peja		
KFI	3	Field diagnostic specialist for forest pests, for fungal diseases and nematode pests	3	Assistants for specialists
KCLB		To be determined		To be determined

**Table 5 – Indicative Activity Plan and Timetable for Repositioning and Restructuring MAFRD Laboratories**

Month/activity		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
1.	<b>Institutional Repositioning Central Level</b>																																						
1.	Project coordination MAFRD																																						
1.2	Steering Committee																																						
1.3	Kick-off meeting																																						
1.4	Legal actions for repositioning by MAFRD (KFVA, Inspectorate, ATSD, KCLB)																																						
1.5	Drafting final organizational development plan with investment plan infrastructure (new and rebuilt, equipment and staff) and training program																																						
1.6	Develop enforcement plan (priorities, sanctions, staff and training need)																																						
1.7	Develop information knowledge management, handling info generated by institutes-advisors-inspectors																																						
1.8	Develop communication function ATSD to sustain its advisory role																																						
1.9	Actually reposition KFVA,KCLB, create ATSD and Inspectorate																																						
1.9	Develop Performance indicators for labs and adv. service																																						

**Table 5 – Indicative Activity Plan and Timetable for Repositioning and Restructuring MAFRD Laboratories**

Month/activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
<b>2. Capacity building needs and project planning, all participating institutes</b>																																						
2.1 Analysis of technical needs in relation to new position, esp. KFVA and KIA as NRLs																																						
2.2 Develop work plan																																						
<b>3 Horizontal capacity building, all institutes and adv. service</b>																																						
3.1 Horizontal trainings on project management																																						
3.2 Communication methods and techniques, coaching																																						
3.3 Horizontal seminars in MAFRD and ATSD																																						
3.4 Participate in 2 meetings on EU funding support																																						
<b>4 Technical capacity building all institutes</b>																																						
4.1 Create new positions and dept., appoint. new staff (11 KIA,6 KFI, 4 IVE)																																						
4.2 Technical training on specific knowledge gaps lab staff, advisors, inspectors, partly provided via EU Twinning																																						
4.3 Technical seminars																																						
4.4 Participation in international scientific events																																						
4.5 National scientific event																																						
4.6 Grants for MSc study young scientists																																						

**Table 5 – Indicative Activity Plan and Timetable for Repositioning and Restructuring MAFRD Laboratories**

Month/activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
4.7 Short-term visits abroad																																								
4.8 Train the trainers activity																																								
<b>5 Technical infrastructure adaptation, all institutes</b>																																								
5.1 Refurbishment KIA labs																																								
5.1 Building q-facilities and greenhouse KIA																																								
5.2 Adaptation other labs, refinement Q facilities KFVA																																								
5.3 Purchase equipment/consumables																																								
<b>6 Strategy planning, all stakeholders</b>																																								
6.1 ATSD and Inspectorate SWOT analysis																																								
6.2 Strategy paper																																								
<b>7 Dissemination</b>																																								
7.1 Project website																																								
7.2 Newsletters																																								
7.3 Publications																																								
7.4 Leaflets and brochures																																								
7.5 Technical-scientific posters																																								
7.6 Final project workshop																																								

# 8.0 SUMMARY, CONCLUSIONS AND MAIN CONSTRAINTS

The **main conclusions** of this Technical Mission on possibilities for restructuring and reorganization of MAFRD institute laboratories KIA, KFVA, KCLB, IVE and KFI, to have them better serve the Field Extension Directorate of the new Agricultural Extension Service, plant and veterinary quarantine needs, and producers (agribusiness and farmers) are:

1. **The conditions of the Institute laboratories are very diverse** and vary from excellent (KFVA) to virtually inexistent (FI) and are generally **understaffed and technical staff is underpaid**.
2. **Phytopathology and quarantine are weakly developed** and inadequate in KIA, IVE and FI.
3. **Plant Quarantine inspectors are placed under the Kosovo Food and Veterinary Agency**. There is no Chief Inspector and **no or only very little surveying and monitoring, border sampling for (plant) quarantine pests and diseases**. **These are critical needs**.
4. **There is little cooperation or interaction** between the various labs, extension advisors and inspectors and producers; the diagnoses of problems are sometimes poorly substantiated, which has led to a loss of credibility for the institutes as currently operated.
5. Therefore **time to reorient the MAFRD strategy toward developing centers of excellence and national reference laboratories, better serving Kosovo agriculture**.
6. In all institutes there is **definitely a basis and will for change**.
7. On the basis of **very good and open interviews**, information was obtained with which it is **thought necessary and feasible** to propose the creation of a new **Advisory and Technical (lab) Services Directorate and a new Inspectorate with a Chief Inspector in MAFRD, eventually repositioning of KFVA under MAFRD and positioning of KFVA and KIA as National Reference laboratories (NRL's)**. See **summary diagram (Figure 2, page 27)**. This proposal includes:
  - **Formation of new Advisory and Technical Services Directorate** (Director and deputy, assistant and secretary (number of staff to be determined))
  - **Formation of a new Inspectorate with Chief Inspector** comprising the veterinary and plant health inspectors, placed outside KFVA and instructed by Policy department MAFRD (number of new staff to be determined) with adequate training provided
  - **Staffing and equipping diagnostic departments at KIA with competent and sufficiently trained experts and assistants:** Bacteriology, Entomology, Nematology and Virology and possibly Herbology (**11 new staff**)
  - Refurbishing some institutes (KIA, KFI), and have quality and safety systems implemented so that they can function as NRL (KIA and KVFA)

- Installment and operationalization of state of the art equipment, especially those for molecular biology, for adequate diagnoses of (quarantine) pests and diseases at KIA and partly also KVFA
  - Starting application for accreditation according to ISO 17025 (KIA, KFVA, IVE) and have quality managers appointed (3 new staff)
  - Formation of specialized (advisory) teams in the wine and vegetable area as advisor (4 staff) and laboratory experts (4 new staff) and at in forestry at KFI (6 new staff)
  - Placement of weather disease stations at IVE and KIA linked to disease and irrigation prognosis (number of new staff to be determined)
8. **Refurbishment of labs is (for staff safety and NRL function) mandatory and should be marked as a Ministerial responsibility, using its (increased) capital investment budget**
9. **Restructuring the advisory service and plant health and quarantine department would greatly benefit from an EU Twinning project.** MAFRD prepared a fiche for such a project at the time of this mission and it was subsequently submitted to ECLO.
10. Also, on the basis of the information mentioned above, an **Indicative Activity Plan** and Timetable (see **page 37**) have been provided
11. Much more (detailed) work and firm steps by the Ministry are needed to get change started. Actually carrying out the proposed changes; and ensuring the sustainability thereof are strongly dependent on the solution of the following main constraints:
- If **revenues** of testing laboratories (KFVA, KIA, Wine Institute) are **not returned** to the Institute due to **inflexibility in budgets and expenditures, and the payment of low salaries for technical staff** persist it will be **virtually impossible to attract and competitively pay and retain critical skilled staff (staffing and keeping skilled staff and keeping motivation of skilled staff one of the foremost problems in adequate operation of the laboratories).**
  - At the same time and **for the same reason, the guarantee of the *adequate and timely procurement of consumables* will continue to be impossible as it is now. This makes it extremely difficult or impossible for the institutes to react adequately in the case of outbreaks of new (quarantine) diseases or situations such as the recent land contamination scare.**





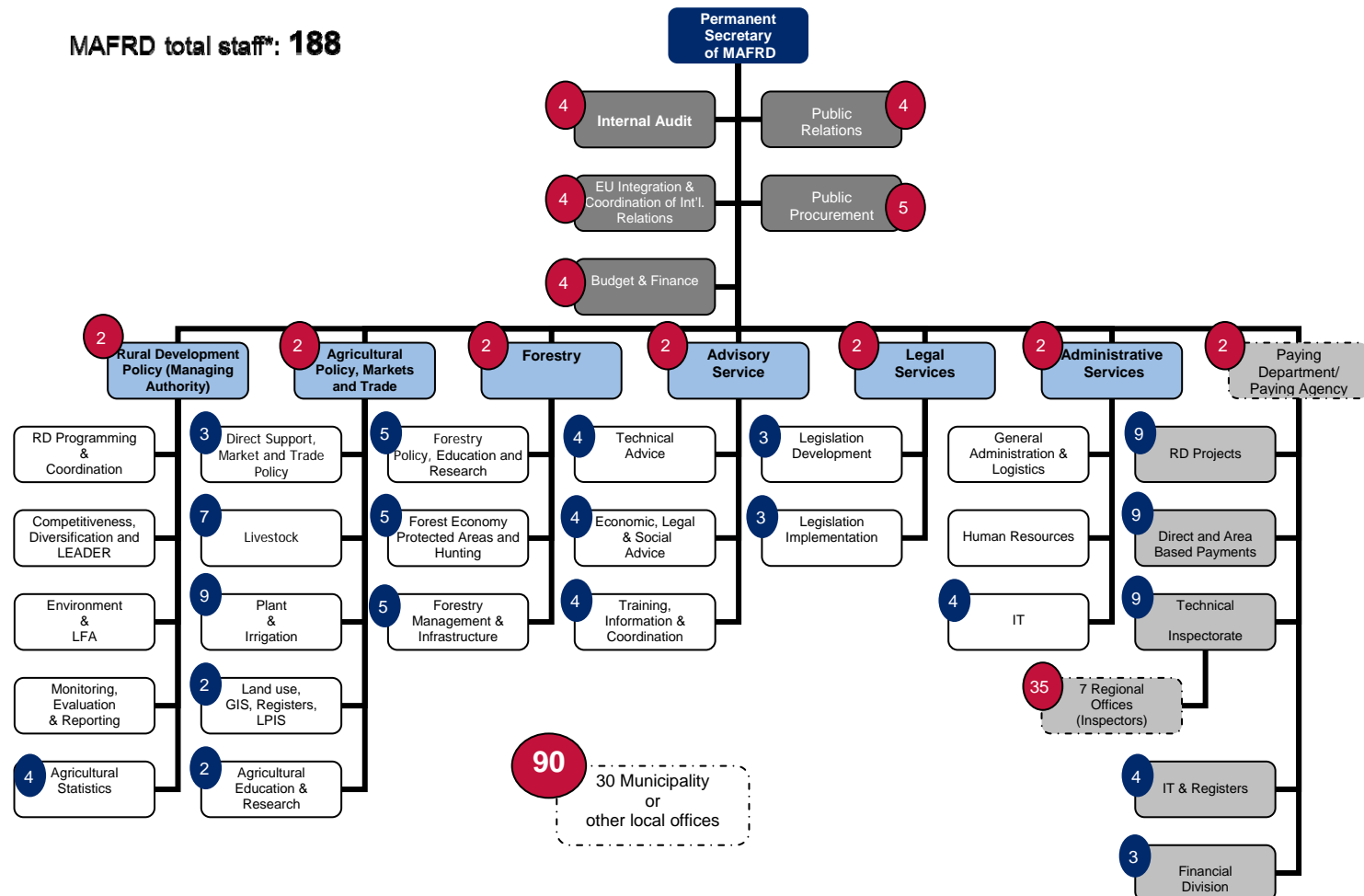
# LIST OF ANNEXES

Annex 1. Organigram (version 10) of MAFRD, February 2012. Source: MAFRD.....	45
Annex 2. Figure 15 Proposed Reorganization of the Agricultural Extension Service. February 2012. ....	46
Annex 3. Terms of Reference of Mission for Jaap D. Janse .....	49
Annex 4. Itinerary and persons met.....	51
Annex 5. Detailed information on and recommendations for KIA .....	57
Annex 6. Detailed information on and recommendations for KFVA .....	65
Annex 7. Detailed information on and recommendations for IVE.....	70

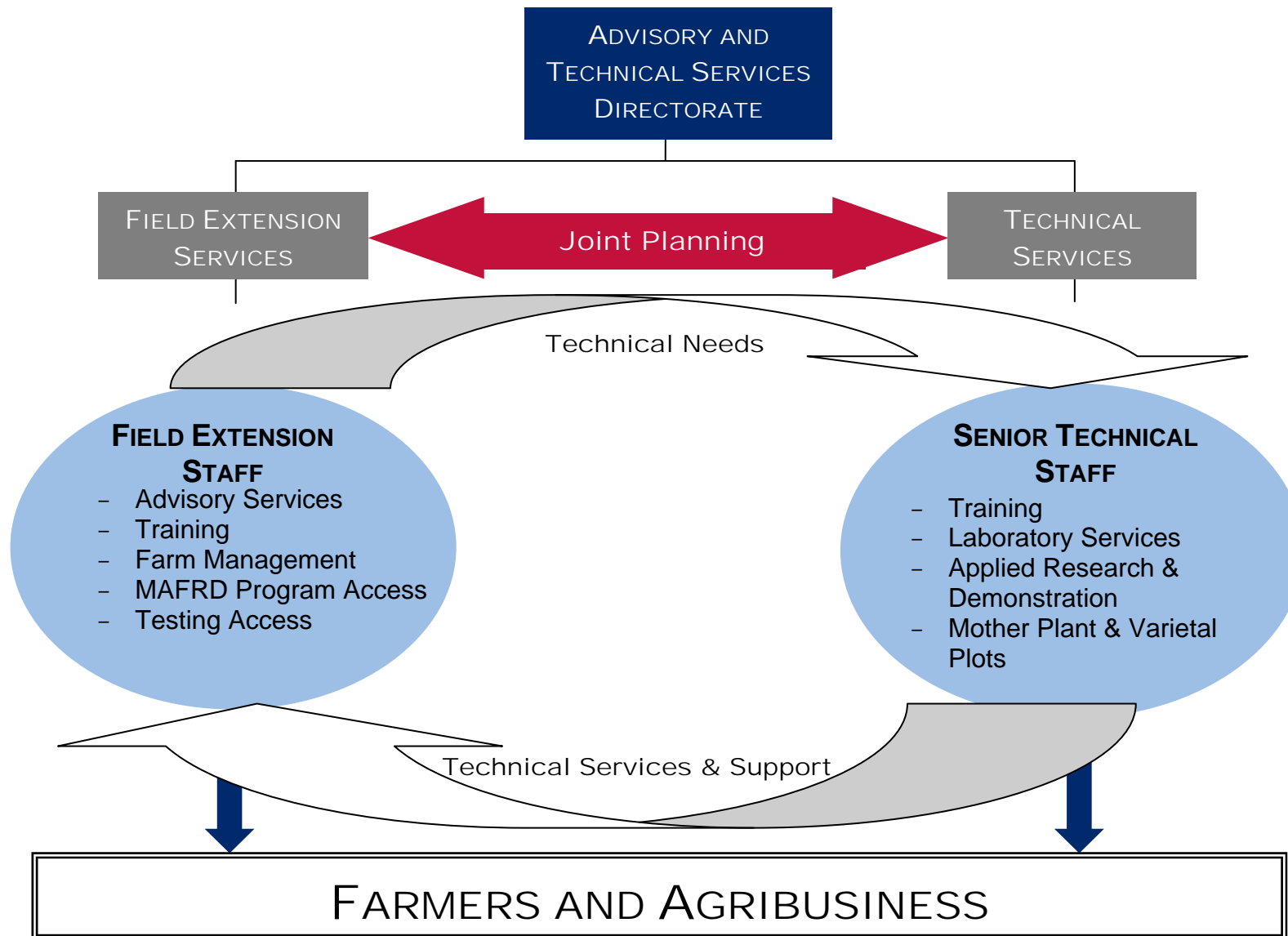


# ANNEX 1. ORGANIGRAM (VERSION 10) OF MAFRD, FEBRUARY 2012. SOURCE: MAFRD

MAFRD total staff\*: 188



# ANNEX 2. FIGURE 3 PROPOSED REORGANIZATION OF THE AGRICULTURAL EXTENSION SERVICE. FEBRUARY 2012



Source: MAFRD, Mr Greg Vaut



# ANNEX 3. TERMS OF REFERENCE OF MISSION FOR JAAP D. JANSE

## TECHNICAL ASSISTANCE RE ORGANIZATION OF LABORATORY SERVICES OF THE MINISTRY'S SCIENTIFIC INSTITUTES

### Background

The Ministry of Agriculture, Forestry and Rural Development (MAFRD) intends to redefine the purpose, structure and activities of the Kosovo Institute of Agriculture (KIA) in Peja and the Wine Institute in Rahovec in order to realign the institutes more closely to the Ministry's current strategy and priorities. It also wishes to understand the needs and resources available in the Ministry's Forestry Institute (KFI) and Kosovo Center for Livestock Breeding (KCLB).

Some of these institutes provide some type of agricultural extension functions/services to producers and all four have some sort of laboratory facility and/or need for analytical services. Under the current concept for reorganization of the two institutes, their original emphasis on primary scientific research will be replaced with an obligation to serve farmers and the agribusiness community:

- A greater responsibility for the delivery of technology and technical services to the agricultural sector as part of the new Extension Services through training and related activities, and through the provision of laboratory and analytical services to a variety of clients; and
- Possibly a focus on applied research and demonstration

At present, MAFRD believes that the analytical and other laboratory services will be targeted to at least four key clients:

1. Farmers and livestock producers, as well as forest resource managers ( e.g., soil testing, certification of genetic materials, phytosanitary and entomological inspections and certifications, etc.) via or in cooperation with the MAFRD Extension Service
2. Businesses (pesticide residue testing, wine quality, phytosanitary certifications and testing, etc.)
3. The Kosovo Veterinary and Food Agency (KFVA - for a variety of laboratory and analytical services)
4. The Faculty of Agriculture (supporting educational programs requiring laboratory facilities and providing internships and other opportunities for students in relevant disciplines)

MAFRD requires an expert to provide short term technical assistance to assess the projected demand for laboratory and analytical services within MAFRD (including the new agricultural extension service) as well as among potential external clients; and to identify the nature and scale of the analytical resources (technical and human) currently available among the four institutes to meet that demand; and develop an action plan and budget for MAFRD's consideration and implementation.

### Scope of Work

The consultant will:

1. Review the current laboratory and analytical capacities (physical and human) of each of the institutes, including inspecting facilities and interviewing the staff to establish what exists today and its value;
2. Interview representatives of the target client groups (farmers and Extension Services, agribusinesses and food businesses, KFVA, and the Faculty of Agriculture) in order to define the types and scale of services that will be required to meet their needs, with recommendations on how to prioritize services to each client group;
3. Meet with MAFRD officials and representatives of other donor funded development projects to elicit their comments and suggestions on these issues; including, but not limited to: KCLB (Italy); Kos-Agri (Italian), EU, GIZ, NOA (USAID), KPEP (USAID), and InterCooperation (Swiss);
4. To the extent practical, recommend a fee based strategy for services to help ensure the sustainability of these services; and
5. Recommend a development plan for the institutes to reach the capacities required, including a proposed organizational structure, an action plan (up to 3 years, with timetable), and an indicative resource budget covering physical infrastructure, human resources (staff and training required), and equipment.

#### **Level of Effort and Place of Assignment**

This requirement will require up to four weeks work (6 day working days per week) and will be performed in Kosovo.

#### **Target Dates**

January 9 – February 6, 2012

#### **Deliverables**

1. On departure from Kosovo, an exit briefing for MAFRD, USAID, NOA and possibly other donors concerning the consultant's principal findings and recommendations
2. Within two weeks of leaving Kosovo, a written report to include:
  - a. An inventory and evaluation of the current capacities, resources and clients of the four Institutes;
  - b. A strategy for rationalizing the existing and new laboratory capacities and resources in order to improve efficiency and effectiveness and most efficiently direct any new investment that may be required;
  - c. A three year development plan for the institutes, recommending organizationally and operationally, how the institutes should relate to their various client groups, to each other, to the new Extension Services, and to the rest of MAFRD; and including a target organizational structure (within MAFRD), an action plan with timetable, and an indicative resource budget; and
  - d. Recommendations regarding a sustainability plan for the institutes, including a fee structure and other requirements where practical.



# ANNEX 4. ITINERARY AND PERSONS MET

*Sunday, January 15, 2012*

Travel from The Netherlands to Pristina

*Monday, January 16*

## **MAFRD - Pristina**

1. His Excellency Mr. Blerand Stavileci, Minister of MAFRD
2. Kapllan Halimi – Permanent Secretary
3. Bajram Imeri – Director of Livestock Department
4. Isuf Cikaqi - Director of Department for Plant Production and Protection
5. Wolf-Dieter Milhan, Advisor of Livestock department Animal production

## **NOA office**

1. Martin Wood – head of NOA Project
2. Fatmir Selimi – Deputy chief of NOA Project, Tetra Tech ARD
3. Beza Ilazi – Project management Specialist
4. Branimir Dimitrijevic – Market assessment team
5. Maxhun Shehaj – Fruit production specialist Tetra Tech ARD
6. Ismet Babaj –Local Consultant for Vegetable / NOA Project
7. Claudia LaLumia – Associate NOA, Tetra Tech, Agriculture and Economic growth

*Tuesday, January 17*

## **KIA – Peja (Kosovo Institute of Agriculture)**

1. Fehmi Geci – Director of KIA
2. Bardh Begolli – Chief of Chemical Analytic Laboratory
3. Bakir Kelmendi – Chief of Seed Quality Laboratory
4. Nevzat Aliaga – External collaborator
5. Zenun Husaj – Agronomist/pedologist ( without contract)
6. Flora Gashi – Chemistry – Enologist
7. Valmira Havolli – Chemistry (without contract)

## **Forestry Institute – Peja**

1. Deme Loxha – Director of Forestry Institute

*Wednesday, January 18*

**GIZ – Pristina**

1. Mustafa Kastrati – Local Expert
2. Agim Rysha – advisor Economy program

**KLBC – Peja (Kosovo Livestock Breeding Center)**

1. Xhavit Bytyqi – veterinarian, Director of KLBC
2. Adil Maloku – Veterinarian – expert

*Thursday January 19*

**Institute for Viticulture and Enology (IVE) – Rahovec**

1. Sylejman Bala – Director of Institute
2. Ylber Kuqi – Head of enology sector
3. Nesim Morina – Head of viticulture sector
4. Xhevat Lushi – GIZ expert
5. Mustafa Kastrati – GIZ expert

**At MAFRD – Prishtina**

1. Prof. Fadil Musa – ex–director of KIA, presently director of private laboratory Meti & Sara and Project coordinator at MAFRD

*Friday, January 20*

**KFA (Kosovo Food Agency)**

1. Valdet Gjinovci – Executive chief of KFA
2. Xhemajli Dervishi – Director of KFA laboratories
3. Fillojeta Rrustemi – Epidemiologist

**FAO Donor office at MAFRD, Pristina**

1. Naser Krasniqi – National team leader
2. Aleksander Nikolovski – chief technical advisor, forestry expert

**Kos-Agri**

1. Fabrizio Contento - Project Manager
2. Emine Daci – Local Expert
3. Enver Fetiu – Local Expert
4. Habil Zeqiri – Local coordinator of Kos-Agri Project /Chief of Horticulture Project

*Monday, January 23*

**Faculty of Agriculture, University Pristina - Pristina**

1. Skender Muja – Dean of Agricultural and Veterinary Faculty Pristina
2. Sali Aliu – Professor of Agricultural and Veterinary Faculty Pristina

3. Afrim Hamidi – assistant professor food safety and quality
4. Shukri Sh. Fetahu –former dean of University, Head of Seed Bank and genetic resource dept. FAUP

**Representative Agribusiness Kosovo and farmer**

1. Avdullah Isufi - wheat and wheat seed producer as well as director of Director of ‘Semenarna Kosove’ company, Livagje

*Tuesday, January 24*

**Helvetas InterCooperation, Swiss donor- Pristina**

1. Basri Pulaj – Project officer
2. Stuart Pettigrew – Agribusiness Advisor

**Private phytopathological and soil testing laboratory – Sara & Meti - Pristina**

1. Fadil Musa, director

*Wednesday, January 25*

**MAFRD – Pristina**

1. Shqipë Dema – Director of Policy Department MAFRD
2. Xhevdet Krasniqi – Head of Veterinarian Chamber of Kosovo (meeting at Livestock dept MAFRD)
3. Sherfi Kurti – Professor of Veterinarian Faculty in Pristina (meeting at Livestock dept. MAFRD)

**Agribusiness – potato processing industry ‘Pestova’, also seed potato producer, Pestova**

1. Bedri Kasumi - director

*Thursday January 26*

**EU donor project ‘Further support to land use at MAFRD’**

1. Rutger Kuiper – team leader

**Representative Istituto Nazionale de Economia Agraria, Roma, Italy, advising institute at MAFRD**

1. Guido Bonati

*Friday, January 27*

**Field visit, municipality Peja**

1. Sherif Bytyqi – Farmer – producer of ornamental trees and fruit seedlings
2. Lek Duhani – Farmer – producer of fruit seedlings
3. Selam Shala – Farmer- Vegetable producer, in green house and open field

*Monday, January 30*

**Private laboratory ‘Agrivet’ soil and pesticide residue testing laboratory, Pristina**

1. Xhevdet Elezi – director and Professor at Agricultural Faculty – Agro-chemistry
2. Agron Halim – assistant

### **Forestry agency, Pristina**

1. Ahmet Zejnullahu, chief executive

*Tuesday, January 31*

### **KIA/MAFRD Pristina**

1. Xhabir Morina – Deputy Minister of MAFRD
2. Fehmi Geci – Director of KIA
3. Michaela Pichler, Resident Twinning Adviser, EU-Twinning Project KS 10 IB AG 01

*Wednesday, February 1*

### **Ministry of Public Health – food safety laboratories, laboratory testing center – Pristina**

1. Drita Zogaj - director

*Thursday February 2*

### **MAFRD, Pristina (presentation results mission)**

1. His Excellency Mr. Blerand Stavileci, Minister of MAFRD
2. Kapllan Halimi – Permanent Secretary

### **NOA Office Pristina (presentation results mission)**

1. NOA staff and representatives of donors:
  - Fatmir Selimi NOA
  - Maxhun Shehaj NOA
  - Ismet Babaj NOA
  - Reshat Ajvazi NOA
  - Fabrizio Contento - Project Manager Kos-Agri
  - Emine Daci – Local Expert Kos-Agri
  - Enver Fetiu – Local Expert Kos-Agri
  - Habil Zeqiri – Local coordinator of Kos-Agri Project /Chief of Horticulture Project MAFDR
  - Mustafa Kastrati GIZ
  - Veronika Hofzinger – GIZ
  - Faton Nagavci - NOA
  - Kujtim Lepaj - NOA

*Friday, February 3*

### **MAFRD, Pristina (presentation mission results)**

1. Shqipe Dema Director of Policy Department MAFRD
2. Bajram Imeri Director of Livestock Department MAFRD
3. Isuf Cikaqi - Director of Plant Production and Protection Department MAFRD
4. Hysen Thaqi - Director of Rural Department MAFRD

5. Arta Balaj – Adviser of Minister MAFRD
6. Shefki Zeqiri – Director of Legal Department MAFRD
7. Fllanza Balaj – Director of Central Administration MAFRD
8. Shaban Dreshaj – Head of sector of Advisory Services
9. Sebahate Haradinaj – Director of EU Integration Department
10. Agron Berdyna – Officer of EU Integration Department

*Saturday, February 4*

Travel, return to the Netherlands



# ANNEX 5. DETAILED INFORMATION ON AND RECOMMENDATIONS FOR KIA

**Ministry of Agriculture, Forestry and Rural Development  
Department of Plant and Production and Protection  
Kosovo Institute of Agriculture at Peja**

## **In operation**

Since 2010 with aid of Kos-Agri, KFOR, EAR, ILVO- Belgium, and Faculty of Agriculture and Environment-Tirana, Albania.

## **Location**

Peja, at the border Dukagjini alluvial plain or White Drini river plain with river Drini as main water source with irrigation, where vegetables, potatoes, fruits and maize are the main crops.

## **Serving**

National

## **Legal status**

Public Institution with activities in all agricultural crops and agricultural products, including soil analysis Acting according to the Administrative Guidance no. 2003/03, of date 18/06/2003, by which KIA is mandated for its role and activities.

## **Accreditation status**

Not accredited. Methods followed in seed testing are according to ISTA. Variety testing follows EU VCU (Value for Cultivation), DUS testing (distinctness, uniformity and stability) and OECD (Organization for Economic Cooperation and Development) seed certification schemes. KIA is in the process of applying for accreditation and it is in the process of accreditation according to ISTA 17025 and 9001.

## **Laboratory safety, Quality Assurance systems and Quality control of laboratory operations, validation of methods**

Poorly developed, e.g. storage of chemicals without proper labeling in simple cupboards. No quarantine facilities.

## **Structure and Staff**

### *A. Laboratories*

1. *Analytical Laboratory* (Four staff contracted and four not contracted.) – physical-chemical tests of soil, fertilizer and compost, animal feed, irrigation water, plant and animal products, beverages and alcoholic and nonalcoholic beverages, wines, etc. In 2011 some **3.200-3.500 samples**.

2. *Laboratory of Seed Quality Testing* (Five staff) – testing quality of seeds of cereals, industrial crops, forage plants, and vegetables. In 2012 some 700-750 samples.
3. *Laboratory of Plant Protection and Microbiology* (One contracted and one not contracted staff) – diagnostic laboratory, at present only for mycology and bacteriology. In 2012 some 600-700 samples.

**B. Other departments**

1. *Department of Plowing and Horticulture* ( One staff)

The only department at national level authorized for testing varieties and hybrids of different agricultural crops present in approved list of MAFRD. Experimental field (6 ha) for fodder crops (created in cooperation with ILVO, Merelbeke, Belgium) Field experiment in application of nanotechnology on wheat and monitoring of clean lines of wheat in collaboration with the Faculty of Agriculture and Environment in Tirana-Albania. Created 4 new varieties of wheat. Research on implementation of new technologies (Application of a new Technology for wheat nutrition to reach a yield of 8 ton per hectare without irrigation) on 50 hectares of wheat.

2. *Soil Department* (Two contracted and One not contracted staff)

Responsible for collecting and preparing soil samples, opening pedological profiles, exact description of soil profiles and sub-profiles, professional interpretation of samples' results. This Department supported by the EU Project FSLU. Yearly (2010-2011) collecting over 300 samples from a total of 1000 samples.

3. *Department of Horticulture and Viticulture* (One retired staff)

Maintained an orchard with mother plants until stopped by MAFRD in 2003. Will be recreated in 2012 with aid of Kos-Agri project.

4. *Department of Plant Protection and Microbiology*

Supports MAFRD in drafting laws and amendments (AI) in the field of plant protection and pesticide usage. Responsible for monitoring and surveying Fungi and Bacteria in agricultural crops. Has performed a small monitoring activity on *Erwinia amylovora* in fruit trees in cooperation with InterCooperation-Switzerland. (c. 100 samples) in 2011

5. *Experimental Farm* ( 220 ha agar land and 87ha over 1500m above sea level)

Responsible for technical execution of experiments for other sector. Experimental Farms – Kosovo Institute of Agriculture legally owns 300 ha of agricultural land, which lies in two cadastral municipalities in Peja and Pristina.

**Total staff: 33:** 12 academics, 6 technicians, 4 administrative, 6 field staff, 4 guardians, 2 cleaning persons

**New structure foreseen for 2012:**

The Institute is in the process of anticipating reorganization and developing a new organigram. New (translated) organigram promised by KIA, not received.

**Present infrastructure**

Partly refurbished existing building. Mostly old and insufficient lab furniture. Sufficient space for present testing and potential increase of number of tests and new labs to be created and equipment to be acquired. For specific shortcomings see under ‘Activities foreseen in 2012 to serve growers and advisory service/inspector staff’

**Present equipment**



Sufficient for lab 1 and 2 for all present and future testing, including 3 GC (2 operational) and one GC-MS (ready to operate), HPLC (not operational), spectrophotometry (operational). Not sufficient, in fact very poorly developed for lab 3 (only some agar media and light microscope available)

#### Procurement of consumables:

Till 2013 guaranteed by donor. After 2013 difficult due to non-flexible budget and administrative impediments

Consumables, however, are guaranteed by KIA budget through tenders.

#### Revenues

Foreseen c. 180,000 euro in 2012 (Around 130,000 € by Lab Tests and 50,000 by Agricultural products.)

#### Possibility to use revenues for procurement of consumables or capital equipment

None

#### Project support to institute in past and actually ongoing

ILVO Project from Belgium for Testing of influence of feed to product of milk and meat of cows.

#### Project support foreseen/wanted

1. Cultivation and Protection of *Gentiana lutea*.
2. Accomplishment of a project for creating 3D Pedologic Map for Kosovo territory.

**Basic Tasks:** See under A. Laboratories and B. other Departments

#### Budget

Institute has its own budget, but for procurement and any other budget matters should go through the Ministry. Included in the Budget Code are 33 employees. Positions for four Technicians, One Microbiologist, and One Pedologist are not staffed at the moment, see organigram below.

Code	Description	Approved Budget/2011	Budget spent until 25.11.2011	Difference (unspent)	% e spent
<b>I</b>	<b>WAGES AND SALARIES</b>	<b>1,595,645,00</b>	<b>1,157,563,37</b>	<b>438,081,63</b>	<b>72.55</b>
40100	DMB/PPD Departamenti i Mbrojtjes së Bimëve Plant Protection Department	71,439,00	45,349,98	26,089,02	63.48
40200	DB/LD Departamenti i Blegtorisë Livestock Department	82,628,00	64,924,14	17,703,86	78.57
40300	APK/KFA Agjencioni i Pyjeve të Kosovës Kosovo Forestry Agency	602,987,00	429,092,91	137,894,09	71.16
40400	DZHR/RDD Departamenti i zhvillimit Rural Rural Development Department	129,455,00	108,312,01	21,142,99	83.67
<b>40500</b>	<b>IBK/KIA Instituti Bujqësorë i Kosovës Kosovo Institute of Agriculture</b>	<b>145,871,00</b>	<b>96,559,32</b>	<b>49,311,68</b>	<b>66.20</b>
11303	AQ (DAQ)/CA(CAD) Departamenti i Administratës Qendrore Central Administration Department	166,434,00	124,777,00	41,657,00	74.97
11403	ZM/OM Zyra e Ministrisë/Office of the Minister	124,301,00	70,846,21	53,454,79	57.00

Code	Description	Approved Budget/2011	Budget spent until 25.11.2011	Difference (unspent)	% e spent
40600	DP/FD Departamenti i Pylltarisë Forestry Department	96,971,00	75,343,99	21,627,01	77.70
40700	ZSB/ASO Zyra e Statistikave Bujqësore Agricultural Statistics Office	105,978,00	86,017,09	19,960,91	81.17
45800	EVK/KEI Enti i Verërave të Kosovës Kosovo Enology Institution	54,867,00	44,210,24	10,656,76	80.58
21200	ZDNJ/HRO Zyra për të Drejtat e Njeriut Human Rights Office	14,714,00	12,130,48	2,583,52	82.44
<b>II</b>	<b>MALLRA DHE SHERBIME COMMODITIES &amp; SERVICES</b>	<b>1,757,654,00</b>	<b>1,066,303,72</b>	<b>691,350,28</b>	<b>60.67</b>
40500	Instituti Bujqësorë i Kosovës Kosovo Institute of Agriculture	62,255,00	53,100,25	9,154,75	85.29
<b>III</b>	<b>Sherbime Komunale Municipal Services</b>	<b>127,962,00</b>	<b>76,102,93</b>	<b>51,859,07</b>	<b>59.47</b>
40500	Instituti Bujqësorë i Kosovës Kosovo Institute of Agriculture	8,200,00	6,636,19	1,563,81	80.93
<b>V</b>	<b>Shpenzime Kapital Capital Expenditures</b>	<b>2,439,205,00</b>	<b>1,046,853,68</b>	<b>1,392,369,32</b>	<b>42.92</b>
40500	Instituti Bujqësorë i Kosovës Kosovo Institute of Agriculture	144,209,00	10,244,86	133,960,14	7.10
<b>VI</b>	<b>Donacione/Donations</b>	<b>9,500,00</b>			
40500	Instituti Bujqësorë i Kosovës Kosovo Institute of Agriculture	9,500,00	3,985,00	5,515,00	41.95

Source: KIA

No.	Budget Lines	EURO
1.	Wages and Salaries.	168,671.00
2.	Malls and Services	132,255.00
3.	Municipal	8,200.00
4.	Capital Investment	170,000.00
	<b>TOTAL</b>	<b>479,126.00</b>

Activity	2011	fee	2012	2013	2014	2015
1 Soil samples (10% from inspectors, 90% from advisors)	500	15 €	800	2000	5000	6000
2 Seedling sampling for phytopathological and Microbiological analysis (200 for virus analysis - ELISA and 100 samples for fireblight- <i>Erwinia amylovora</i> - ELISA)	620	20 and 30 €	1000	1600	2000	2200
3 Food products Samples and Agricultural Inputs	2179	20 €	2500	3000	3400	3500
4 Tests of Wine, Alcoholic, and Non Alcoholic Beverages	1562	15 €	1800	1900	2000	2100
Seed Quality Testing	388	25 €	500	1100	1150	1200
<b>TOTAL</b>	<b>5329</b>	<b>98,810€</b>	<b>6600</b>	<b>9200</b>	<b>13550</b>	<b>15000</b>

Soil and food sampling is on fee basis using a price list that is approved by the Ministry. Fees upon import are paid by the importer or the owner of the commodity. Tests for seed producers and Wine Samples for tasting are free of charge.

**Activities foreseen in 2012 to serve growers and advisory service/inspector staff:**

A seed varietal plot of the following crops (based on the national variety list is maintained at KIA for demonstration purposes

Table 5-4 – Field plots of KIA	
Field Plots	Place
Mother plant plots for grape, stone fruit and pome fruit	Land managed by the Institute of Peja
Screen House	Institute of Peja
Collection field for grape varieties	Rahovec (land of municipality or of agriculture school)
Collection field for stone fruits and pome fruits	Peja
Demonstration field for grape (IPM and OF)	Rahovec (possibly in the cooperative )
Demonstration field for stone fruits (IPM)	To be defined Institute of Peja
Demonstration field for vegetable (OF)	To be defined Institute of Peja

Source: Kos-Agri project mission report Assistance to reorganization and restructuring of laboratories of pest diagnosis and analysis (code 2.5.1), 16.01.2011 – 20.01.2011

Kos-Agri project mission of 16.01.2011 – 20.01.2011 determined a number of shortcomings in different labs to be improved during the lifetime of the project in order to have KIA's testing and diagnostic services functioning properly (for further details see Kos-Agri project mission report Assistance to reorganization and restructuring of laboratories of pest diagnosis and analysis (code 2.5.1), 16.01.2011 – 20.01.2011:

1. Electricity network inadequate and deficient lighting system
2. Lack of vents and of air conditioners in all rooms
3. Presence of external water and sewage pipes on the floor.
4. Frequent power cuts
5. Outdated benches and cabinets in poor conditions
6. Presence of damaged hoods and of many pieces of equipment outdated and/or poorly functioning on the floor and on the benches
7. New equipment not used or just operational due to the lack of trained staff (e.g. equipment for serological analysis
8. Glassware, small laboratory equipment and chemicals for analysis present in insufficient quantities
9. Inefficient distribution of space and equipment.

**Activities/tests/capital investments needed to better serve growers and advisory service/inspector staff (mainly connected with lab analysis):**

1. Present and structure KIA as **national reference laboratory** for plant health and plant protection. Incorporate expertise on forestry (quarantine) pathogens and serve as national reference lab for laboratory diagnostics and soil analysis for agriculture and forestry.
2. **Immediate increase staff by hiring of three (potential) experts for Entomology, Virology and Nematology and 3 assistants. English speaking required or trained. Within 1 year time hire three more experts, one for Bacteriology, two Molecular biologists serving all disciplines and one for Herbology/non parasitic diseases.** For virology and nematology staff was foreseen in Kos-Agri project in 2011, but till now no staff hired and trained. Train the phytopathologist for specialized mycological diagnostics.
3. **Train staff to operate sophisticated equipment and to follow state of the art analytic and diagnostic protocols, see below.**
4. **Reshuffle of laboratories and refurbish of furniture, acquiring new equipment** for Laboratory for Plant protection and Microbiology according to Kos-Agri Project Plan. Moreover acquire an ELISA reader, relevant antisera and conjugates (virology), immune-fluorescence microscope,

relevant antisera and conjugate (Bacteriology) and classical and real-time PCR equipment (for all disciplines). Probably purchase of LC-MS for pesticide residue analysis because KIA's try is to accomplish testing the entire pesticide residue (for all groups of pesticides).

5. **Consider shift of one GC to Faculty of Agriculture** where only one outdated (no longer supported) GC is present. Capacity of 1 or 2 GC enough for KIA, based on expected sample numbers.
6. **Installment of quality assurance and lab safety rules and precautions in all laboratories**, including mouth/face protection
7. **Installment of a quarantine regime adapting to EPPO** (European Plant protection Organization), including safe waste disposal and a quarantine greenhouse or quarantine growth chamber facility
8. **Acquire by extensive training of new and present staff the necessary diagnostic expertise, working according to EPPO diagnostic protocols for all relevant A1 and A2 EPPO list quarantine organisms** by using EPPO database facilities and recommendations. Have Kosovo experts participate in relevant expert panels (this is also true for EPPO's activities concerning use of modern, safe and effective pest control methods (EPPO standards for the registration of plant protection products)
9. **Validate methods used according to EPPO standard PM 7/98** Specific requirements for laboratories preparing accreditation for a plant pest diagnostic activity and EU document SANCO/10684/2009 Method validation and quality control procedures for pesticide residue analysis in food and feed.
10. **Install and perform pest risk analysis according to EPPO standards**
11. **Leave testing of heavy metals and processed food products to Institute of Public Health**
12. **Concentrate on pesticide residue testing and not on quality check of pesticides**
13. **Developing a national monitoring and survey plan for (quarantine) pests and diseases in grapevine** by the Dept. of Plant production and Protection, to be executed by inspectors of KFVA (quarantine) and specialized extensionists (quality diseases, see under 7) with a set number of inspections/surveys per year and a set minimum number of samples to be sent to KIA
14. **Install symbolic fee** of 1-2 euro for sample analysis that up till now was free of charge. Increase fee after two years with a reasonable amount and again after 4 years.
15. Development of **field diagnostic expertise for pest and diseases**, Development of **structured sampling and sampling transport** for samples that require specialized laboratory analysis to KIA, (phytopathological and soil samples).
16. **Establish weather station** and make it operational for disease prognosis and install and make operational aphid(suction) traps for monitoring possibilities of virus transmission

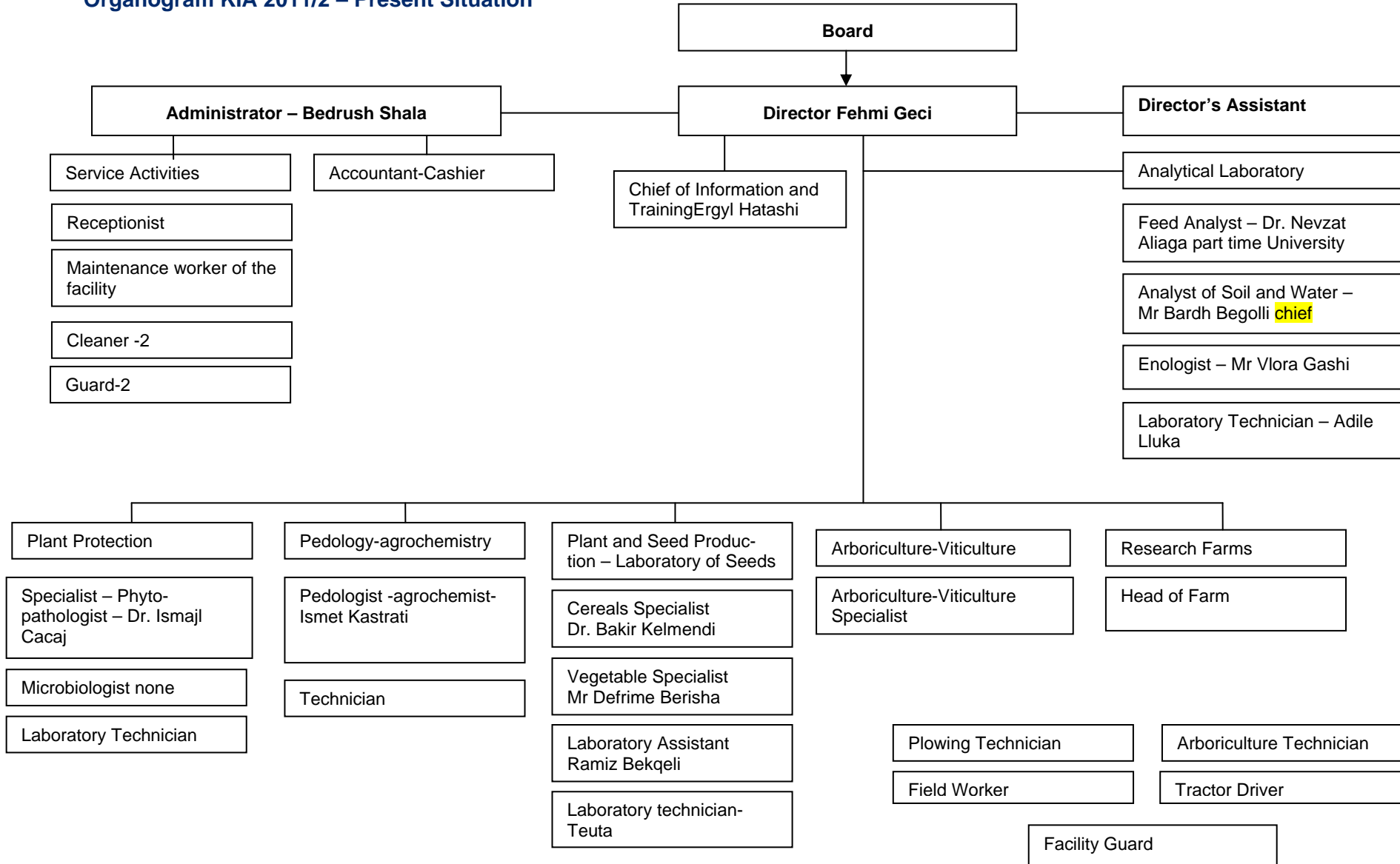
**Table 5-5 – Extra investments/expenditures KIA foreseen for 2012-2015, concentrating on lab services partly based on Kos-Agri project mission report 'Assistance to reorganization and restructuring of laboratories of pest diagnosis and analysis (code 2.5.1), 16.01.2011 – 20.01.2011'. Other suggestions: this report**

	Item	Year	Costs
1	Staff	2012	
2	Office equipment for staff		
3	Weather station for disease prognosis	2012	700
4	Aphid traps for virus transmission prediction (e.g. potato diseases)		
5	-20C freezer		
6	Spectrophotometer		
7	Classical PCR or real-time PCR machine		
8	Immunofluorescence microscope		

**Table 5-5 – Extra investments/expenditures KIA foreseen for 2012-2015, concentrating on lab services partly based on Kos-Agri project mission report 'Assistance to reorganization and restructuring of laboratories of pest diagnosis and analysis (code 2.5.1), 16.01.2011 – 20.01.2011'. Other suggestions: this report**

	Item	Year	Costs
9	Precision balance		
10	Microfuge		
11	Dedicated PCR pipette set		
12	2 Heating blocks		
13	Consumables (buffers, mastermix ingredients specific primers/probes for PCR)		
14	Ingredients for selective microbiological media		
15	Operating costs	2012-2015	200
16	Electrophoresis equipment (horizontal/vertical)		
17	2 Magnetic stirrer plus hotplate and horizontal stirrer, 2 vortexer		
18	Distilled water device and ultra-pure water device		
19	Vertical class II laminar flow cabinet		
20	UV transilluminator/geldoc system		
21	Plant extraction device (e.g. Homex)		
22	2 pH meter		
23	LC-MS		
24	Flake ice machine		
25	Antisera, conjugates for ELISA and IF		
26	10-well microscope slides, cover slips, immersion oil, high pressure mercury lamps		
27	Chemicals and other consumables for all operational tests		
28	Autoclave of 10 liters.		

**Organogram KIA 2011/2 – Present Situation**



# ANNEX 6. DETAILED INFORMATION ON AND RECOMMENDATIONS FOR KFVA

Prime Minister's Office  
Kosovo Food and Veterinary Agency  
**Food and Veterinary Laboratory – Pristina**

## **In operation**

Since 2001

## **Location**

“Industrial Zone” N.N. Pristina, 10000 Republic of Kosovo

## **Serving**

*National*

All samples regarding food safety, specifically microbiology, chemical residues, milk analysis, as well as animal health, serology, pato-anatomy, bacteriology, virology are sent to the Agency laboratory for investigation.

## **Legal status**

Responsibilities of KFVA (according to veterinary law nr. 21/2004)

Measures concerning live animals and biological products, semen, cells and embryos, by-products and plant products subject to:

- veterinary requirements, relating to the:
- control of infectious and contagious diseases;
- notification of certain diseases specified by the Ministry;
- animal identification and registration;
- animal health conditions required for their movement;
- animal health conditions required for their import;
- measures, concerning products of animal origin relating to the requirements for their production and placing on the market
- conditions required for their import;
- measures relating to live animals and products of animal origin concerning:
- prohibition on the administration and use of certain substances;

- monitoring of certain substances and residues;
- animal waste and pathogens;
- measures concerning veterinary inspections relating to the export of live animals, products of animal origin and biological products, semen, cells and embryos, by-products and plant products subject to veterinary requirements;
- certification with regard to veterinary controls;
- The relationship with other international organizations pertaining to veterinary matters.

### **Accreditation status**

Not accredited

### **Quality Assurance systems and Quality control of laboratory operations, validation of methods**

In progress. Most of the laboratories have developed their SOP's according to required standards and have participated in inter-laboratory testing. There have been recent developments with the appointment of a Quality Manager who will work intensively on this process and hopefully set the Laboratory on the right track towards accreditation.

### **Structure and Staff**

The Food and Veterinary Agency Laboratory has a Food Safety facility under which operate the following laboratories:

- Food Microbiology (1 leader with contract; 1 technician without contract; 1 student intern)
- Chemical Residues (1 leader; 2 chemists; 1 technician all with contract)
- Milk Quality (1 leader with contract; 2 technicians with contract; 3 technicians without contract; 1 student intern)

Under the Animal Health laboratory facility are the following:

- Serology (1 leader with contract; 3 technicians without contract; 1 student intern)
- Bacteriology (1 leader with contract)
- Pato-Anatomy (1 leader with contract)
- Virology (Molecular Diagnostics) (1 leader with contract)

The Food Safety laboratory has 2 persons dedicated to sample reception and distribution; these are without a government contract as well. The Animal Health laboratory uses one of the technicians working in Serology as a person to receive and distribute samples.

Also, the Agency has employed a Quality Manager, who will start work on the 1<sup>st</sup> of February, 2012.

### **Present infrastructure**

Two new buildings constructed, one in 2009 the other in 2010. 90% on equipment and furniture is new. Sufficient for present testing and potential increase in the number of basic tests. The facilities meet standards for testing conducted at the moment, and unless there is work with highly pathogenic agents it is sufficient for the near future.

### **Present equipment**

Equipment for basic tests is available. There is a need for back-up equipment for the milk quality laboratory as well as new equipment dealing with confirmatory tests in Serology. Equipment for



confirmatory tests in chemical residues lab (last TAIEX mission recommendation). Not excluded is the need for new equipment for conducting new tests at the other laboratories.

### **Procurement of consumables:**

Procurement of consumables is done by the Agency through tendering if the value of the needs is higher than 10,000 Euros. We have encountered difficulties in this area because of the inexperience of the market in Kosovo with regards to laboratory supply.

### **Possibility to use revenues for procurement of consumables or capital equipment**

Low, lack in legal infrastructure.

### **Project support to institute in past and actually ongoing**

USAID support with Kosovo Cluster Business Support (2007-2009) and Kosovo Private Enterprise Program (2010-ongoing)

### **Project support foreseen/wanted**

Project to help with accreditation on the laboratory

### **Basic Tasks**

Responsibilities of KFVA (according to veterinary law nr. 21/2004)

Measures concerning live animals and biological products, semen, cells and embryos, by-products and plant products subject to:

- veterinary requirements, relating to the:
- control of infectious and contagious diseases;
- notification of certain diseases specified by the Ministry;
- animal identification and registration;
- animal health conditions required for their movement;
- animal health conditions required for their import;
- measures, concerning products of animal origin relating to the requirements for their production and placing on the market
- conditions required for their import;
- measures relating to live animals and products of animal origin concerning:
- prohibition on the administration and use of certain substances;
- monitoring of certain substances and residues;
- animal waste and pathogens;
- measures concerning veterinary inspections relating to the export of live animals, products of animal origin and biological products, semen, cells and embryos, by-products and plant products subject to veterinary requirements;
- certification with regard to veterinary controls;
- the relationship with other international organizations pertaining to veterinary matters.

### **Budget**

The Agency has its own budget.

**Budget for 2011:**

Wages and salaries	778,103.00 €
Goods and services	272,410.00 €
Municipal Services	68,000.00 €
Capital Investments	2,429,550.00 €
<b>Total</b>	<b>3,548,063.00 €</b>

**Budget for 2012:**

<b>Total</b>	<b>3,894,035.00 €</b>
--------------	-----------------------

**Present and expected sample numbers per year per activity**

	Activity	2011	2012	2013	2014	2015
1	Milk Quality Control	16,805				
2	Microbiology	279				
3	Chemical Residues	602				
4	Serology	8,215	7,000			
5	Virology (Molecular Diagnostics)	32				
6	Bacteriology	54				
7	Pato-Anatomy	464				
Total		26,451				

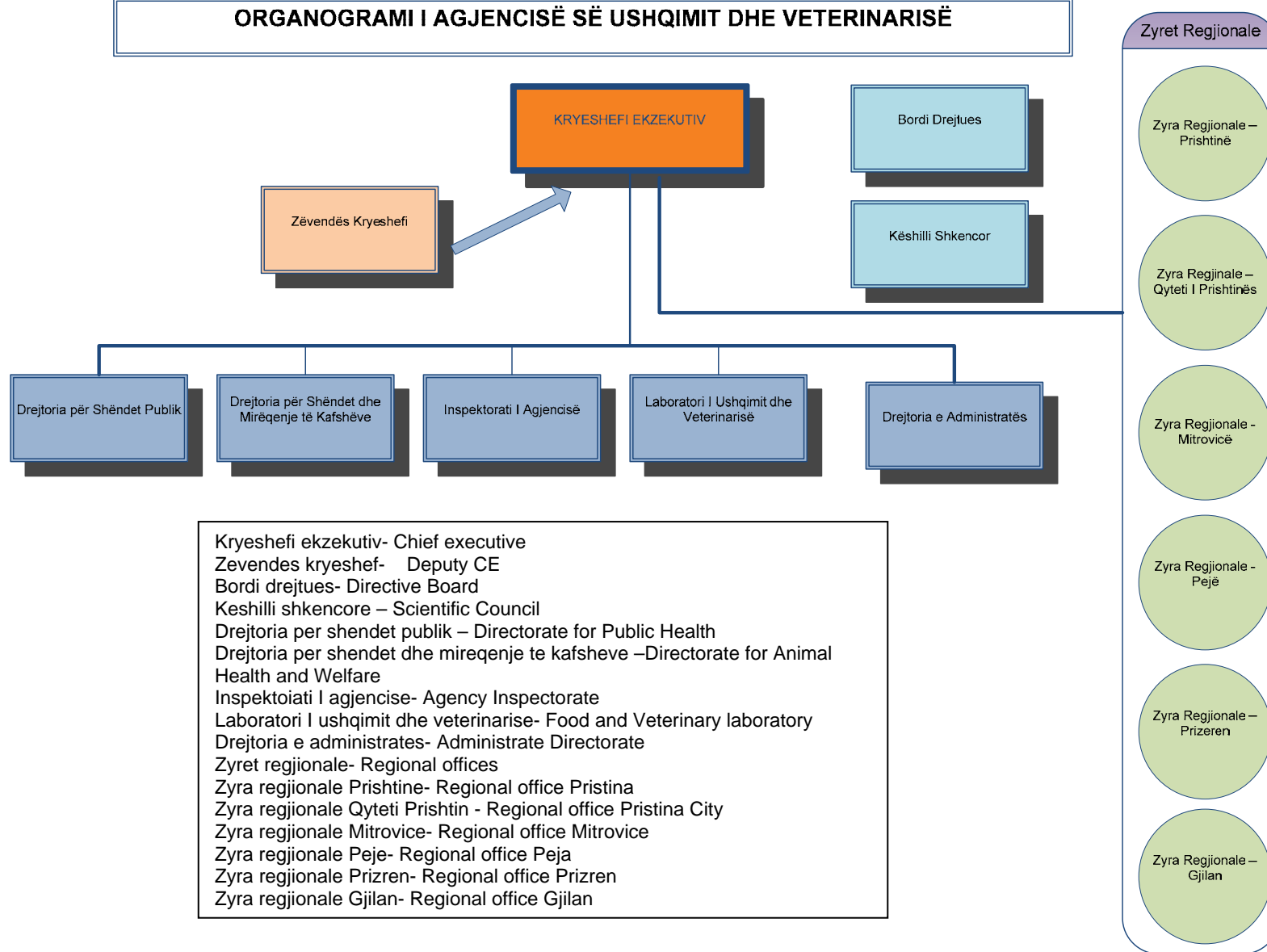
**Activities foreseen in 2012 to serve farmers and advisory service/inspector staff:**

All samples that are brought to the laboratory by farmers are tested free of charge, vaccination regarding certain diseases which are required by veterinary law are provided by the government, free of charge as well.

**Activities/tests/capital investments needed to better serve growers and advisory service/inspector staff (mainly connected with lab analysis):**

17. **Increase laboratory staff with 2 technicians**, one of them senior that can replace lab chief. Train technicians by donor projects such as Kos-Agri, GIZ and IVE
18. **Increase staff with 3 academics and 3 technicians for depts. Where the department of Serological and Molecular methods is the most important** (minimum MSc.)
19. Developing a monitoring and survey plan for (quarantine) pests and diseases, to be executed by inspectors of KFVA (quarantine), veterinarians and specialized extensionists (for other pest and diseases,) with a set number of inspections/surveys per year and a set minimum number of samples to be sent to KFVA
20. **Install symbolic fee** of 1-2 euro for sample analysis that till now was free of charge. Increase fee after two years with a reasonable amount and again after 4 years.
21. Develop a system of **Quality Assurance and Quality control of laboratory operations, and validation of methods**, also by training of responsible staff, where not yet in place
22. Development of **structured sampling and sampling transport** for samples that require specialized laboratory analysis **to KFVA**.
23. Include Insemination Centre, Peja under KFVA and phase out when bulls become too old

## ORGANOGRAMI I AGJENCISË SË USHQIMIT DHE VETERINARISË



Kryeshefi ekzekutiv- Chief executive  
 Zëvendës kryeshef- Deputy CE  
 Bordi drejtues- Directive Board  
 Këshilli shkencor – Scientific Council  
 Drejtoria për shëndet publik – Directorate for Public Health  
 Drejtoria për shëndet dhe mirëqenje të kafshëve – Directorate for Animal Health and Welfare  
 Inspektorati I agjencisë- Agency Inspectorate  
 Laboratori I ushqimit dhe veterinarisë- Food and Veterinary laboratory  
 Drejtoria e administratës- Administration Directorate  
 Zyret regjionale- Regional offices  
 Zyra regjionale Prishtinë- Regional office Pristina  
 Zyra regjionale Qyteti Prishtin - Regional office Pristina City  
 Zyra regjionale Mitrovicë- Regional office Mitrovicë  
 Zyra regjionale Pejë- Regional office Peja  
 Zyra regjionale Prizren- Regional office Prizren  
 Zyra regjionale Gjiilan- Regional office Gjiilan

# ANNEX 7. DETAILED INFORMATION ON AND RECOMMENDATIONS FOR IVE

Ministry of Agriculture, Forestry and Rural Development  
Department of Plant and Production and Protection  
**Institute of Viticulture & Enology (IVE) – Rahovec**

## **In operation**

Created from 02.07.2007 with co-financing of MAFRD and project aid of the German Society for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ) and laboratory in operation since 2010. GIZ financed purchase of Laboratory equipment as well as ongoing training of staff.

## **Location**

Rahovec, in center of main center of viticulture

## **Serving**

*Regional*, c. 4-5000.ha of grapevine of which 80 is used for wine production, and 20% for table grapes, virtually no use for raisin production. In total c. 5000 growers with 80% have an average of one or less ha land. It is expected that the capacity of wine production can be increased to c. 10,000 ha (an acreage almost similar to that present before the war. Production is c. 7.5 t / ha and table grapes 9 t / ha. C 50% of the grapes is processed in the formal sector, 50% by private as wine and spirits. Gape yield c. 3,500 ton per year.

There are at present 12 bigger wineries. C. 3.5 million liter wine is exported, 1 million imported. (Source IVE via GIZ)

Economical relevance of the wine industry is employment and development of specialized niche quality wines with (EU) export value.

## **Legal status**

Public Institution with activities in the Viticulture and Enology Sector in the Kosovo vineyards region. Acting according to Law on Wine No. 02/L-8, which is promulgated by presidential decree dated 14.10.2005 and A.I. in force. Law on Change and Supplements to the Law No. 02/L-8, Law No. 04/L-019, 29 July 2011 promulgated by the Decree No. DL- 021- 2011, dated 12.08.2011 from the President of the Republic of Kosovo Atifete Jahjaga and the Administrative Instruction in force:

- A.I. 06/2006 – for registration and licensing of grape growers, wine producers and processors
- A.I. 11/2006 – on the determination of criteria for sampling and evaluation of wine
- A.I. 24/2008 – on the internal and external registers of enterprises for production of grapes, wine and other products from grapes and wine

- A.I. 03/2009 – on the definition of viticulture territory in Kosovo
- A.I.11/2009 –for setting the criteria for import, export and domestic trade of wine and other products from grapes and wine.
- A.I.15/2009 – for setting the parameters of wine physical-chemical analyses.
- A.I.16/2009 – for setting the criteria about the text on the label

#### **Accreditation status**

Not accredited. Accreditation for laboratory anticipated in near future.

#### **Quality Assurance systems and Quality control of laboratory operations, validation of methods**

Poorly developed

#### **Structure and Staff**

9 staff in two sectors:

- Sector of Viticulture
  - Sector of Enology
- Sylejman Bala, graduated Agriculture Engineer, Leading Manager of Institution,  
 Nesim Morina, Master of Arboriculture-Viticulture, Chief of Viticulture Sector,  
 Ylber Kuçi, Master of Arboriculture – Viticulture, Chief of Enology Sector,  
 Sadik Korenica, Graduated Jurist, Admin-Legal Officer,  
 Ganimete Popaj, Technical Medical Secondary School, Receptionist (*could have potential as lab technician after training*)  
 Minire Shtavica, General Gymnasium Secondary School, Cleaning Woman  
 Xhemajl Qmega, Gymnasium Secondary School, Facility Guard,  
 Selajdin Mullaaliu, Secondary School, Facility Guard,

#### **Present infrastructure**

Refurbished existing building. New (2007) and modern lab furniture. Sufficient for present testing and potential increase of number of basic tests

#### **Present equipment**

Sufficient for basic testing of wine and a potential increase of number of basic tests.

#### **Procurement of consumables:**

Till 2013 apparently guaranteed by donor. In principle the IVE is financed from MAFRD. After 2013 difficult due to non-flexible budget and administrative impediments

#### **Possibility to use revenues for procurement of consumables or capital equipment**

None

#### **Project support to institute in past and actually ongoing**

#### **Project support foreseen/wanted**

#### **Basic Tasks**

1. Management of Land Register of vineyards and wine industry in Kosovo
2. Manages the creation of a collection of grape cultivars and sub grafts for study and research issues.
3. Conduct assessment of grape, wine and classification of wine and other products according to their quality with **laboratory analysis (9 different organic-chemistry tests) and organoleptic analysis**).
4. Issues certificates on the quality of grapes, wine and other products from grape and wine which circulate in the domestic market and are exported.
5. Issues certificates on the quality of grapes, wine and other products from grape and wine which are imported.
6. Granting permission to producers for sugar enrichment of rape or cider, under article 10, 10.2 of the Law on Wine.
7. Keeping records of vineyards,
8. Maintaining the register of grape growers and wine producers,
9. Determining recommended and allowed varieties of grape wine and its sub grafts
10. The institution **monitors the ripening of grapes** and determines the time of harvest.
11. Limits the maximum yields of grapes per hectare, depending on the variety and destination.
12. Evaluates and determines wine and other products from grapes and wine
13. Determines the geographical origin of wine and other products from grapes and wine.
14. Awarding the identification number for physical and legal persons or an independent entrepreneur.
15. The Institution will issue an official number of controls for each liter of wine produced in the Republic of Kosovo.
16. The Institution cooperates with all stakeholders for the purpose of mutual exchange of information. It organizes training, gives advice to farmers, students of the Faculty of Agriculture, pupils of the agricultural branch in Technical Secondary Schools.

On the basis of the new laws No. 02/L-8, Law No. 04/L-019, since July 29<sup>th</sup>, 2011 additional obligations and competences have been incorporated such as:

- Maintenance and updating of data in the land register of vineyards in Kaveko 1.2 software
- Recording protected geographical origin and identification of locations with protected geographical indications.
- Implementation of an Official Control Number.
- The Vine and Vinery Institute has started with the implementation of the Law on Vine and has competency for import and export quality control of wine.
- Increasing wine quality control (already increased from 6-9 basic tests).
- Evaluation and determination of wine and other products from grape and wine
- The Institution monitors the ripening of grapes and determines the time of harvest.

## **Budget**

Institute has its own budget. Included in the Budget Code are 12 employees, but only 8 employees work at IVE. Three employees from MAFRD get their salaries from the budget line of IVE, but they are not staff of IVE. The responsible for the laboratory has been recently suspended. IVE foresees appointment of a graduated Chemical engineer and a technician in the near future.

**Budget for 2011:**

Wages and salaries	51,867.00 €
Goods and services	15,700.00 €
Municipal Services	1,900.00 €
<b>Total</b>	<b>69,467.00 €</b>

**Budget for 2012:**

Wages and Salaries	58.267, 00€
Goods and Services	46.700, 00€
Utilities	1.900, 00€
Subsidies	0, 00€
Capital Investment	0, 00€
<b>Total</b>	<b>106.867, 00€</b>

**Present and expected sample numbers per year per activity**

	<b>Activity</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
1	Basic wine tests (9 determinations)	44	68	75	88	97
2	Samples from import		66	95	120	170
3	Issuing certificates for vineyards	300	3500			
4	Wine licenses	5	5	6	7	9
5	Distillery licenses		120			
6	Licenses for import companies		33	35	36	38
7	Issuing identification numbers	300	1200	1500	1700	1300
8	Licenses for exporting companies		15	16	18	18
9	Notification for uprooting or planting	30	30	60	80	120
10	Issuing wine certificates	44	65	70	75	80
<b>Total</b>		<b>74</b>	<b>110</b>	<b>146</b>	<b>173</b>	<b>218</b>

**Activities foreseen in 2012 to serve growers and advisory service/inspector staff:**

IVA in cooperation with KOS-AGRI is preparing a demonstration plot of grapes of 5 are aimed for research and study (possibly at cooperative) and a plot with a collection of grape varieties.

**Activities/tests/capital investments needed to better serve growers and advisory service/inspector staff (mainly connected with lab analysis):**

1. **Immediate repair loss of suspended laboratory responsible** in order not to lose precious expertise and existing demand for sample analysis e.g. to foreign institutes and therefore potential income
2. **Increase laboratory staff (under sector enology) with 2 technicians**, one of them senior that can replace lab chief. Train technicians by donor projects such as Kos-Agri, GIZ and IVE
3. **Increase staff (under viticulture) with one cultivation and one pest and diseases experts** (minimum MSc )
4. Developing a regional monitoring and survey plan for (quarantine) pests and diseases in grapevine by the Dept. of Plant production and Protection, to be executed by inspectors of KFVA

(quarantine) and specialized extensionists (quality diseases, see under 7) with a set number of inspections/surveys per year and a set minimum number of samples to be sent to KIA

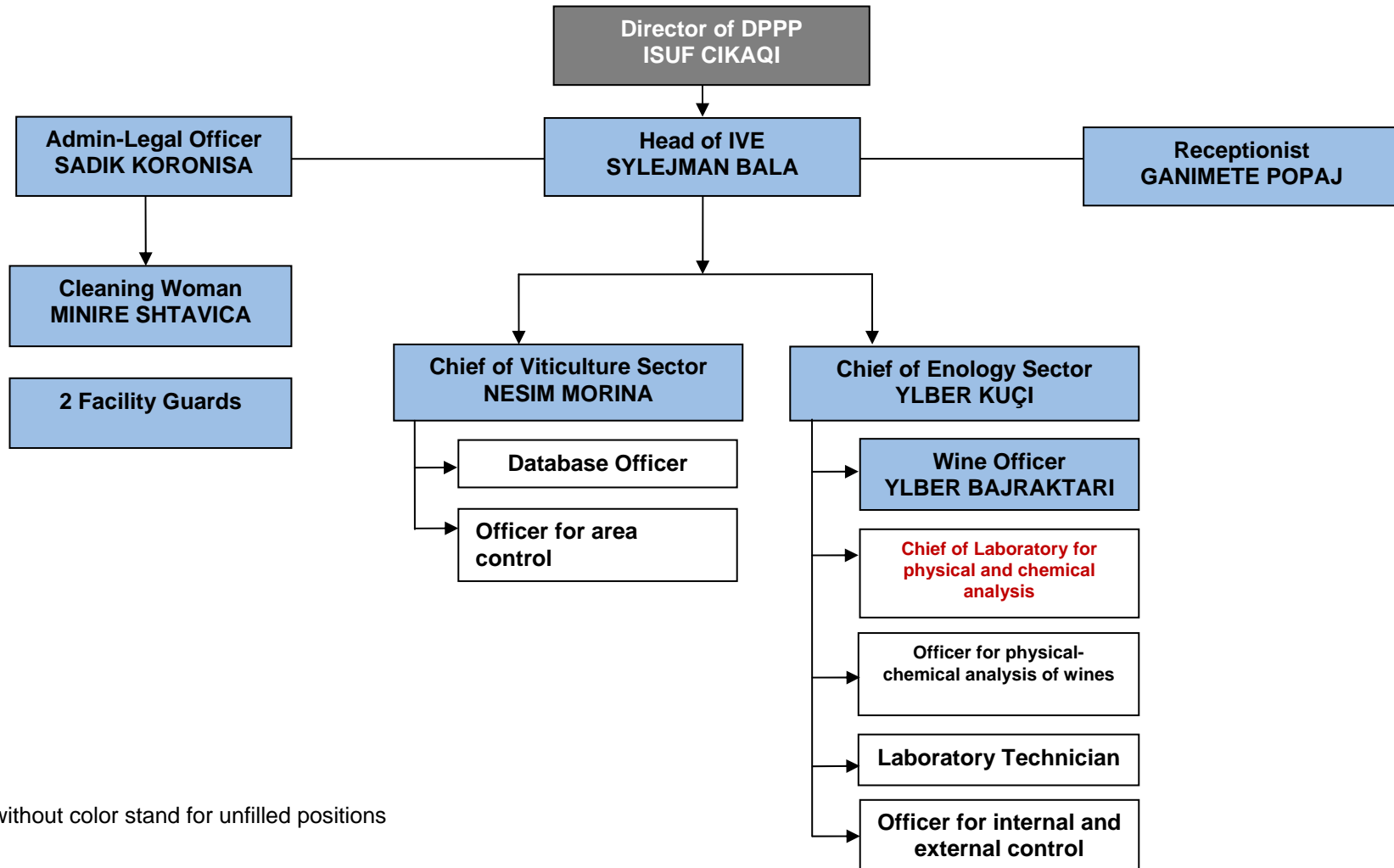
5. **Install symbolic fee** of 1-2 euro for sample analysis. Increase fee after two years with a reasonable amount and again after 4 years.
6. Develop a system of **Quality Assurance and Quality control of laboratory operations, and validation of methods**, also by training of responsible staff
7. Operation of a **weather station** (costs \$250-700) for disease prognosis and determining the correct time for spraying pesticides. This station could serve the vegetable production in the same area as well
8. Development of **field diagnostic expertise for pest and diseases**, specifically related to viticulture and grapevine cultivation (especially e.g. soil preparation) (and related to this also for vegetable production) – proposal for a team of 2-4 advisors specializing in these directions. These specialists could also do soil sampling. Training of one IVA staff as well (see 3).
9. Development of **structured sampling and sampling transport** for samples that require specialized laboratory analysis **to KIA**, Peja (phytopathological and soil samples).
10. Establish a **plot for grape varieties** (planned by Kos-Agri) **at IVE and not as foreseen, at KIA**.

Extra investments/expenditures IVA foreseen for 2012-2015, concentrating on lab services

	<b>Item</b>	<b>Year</b>	<b>Costs</b>
1	Staff (1 agricultural engineer, 2 technicians)	2012	20.000
2	Office equipment for staff		
3	Weather station	2012	700
4	Operating costs	2012-2015	200



**Current Organigram of the Institution of Vineyards and Enology**



Cells without color stand for unfilled positions



**U.S. Agency for International Development Kosovo**

Arberia (Dragodan)

Ismail Qemali St., No.1

Pristina, Kosovo, 10130

Tel: ++ 381 (0)38 59 59 2000

Fax: ++ 381 (0)38 249 493

**[www.usaid.gov/kosovo](http://www.usaid.gov/kosovo)**