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**SUPPORT FOR LEBANON'S ACCESSION TO THE WORLD TRADE ORGANIZATION (WTO)**  
**Regulatory Impact Analysis of Changes in Honey Standards in**  
**Lebanon**

SUPPORT FOR LEBANON'S ACCESSION TO THE WORLD TRADE  
ORGANIZATION (WTO) PROJECT

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**Regulatory Impact Analysis of Changes in Honey Standards in Lebanon**

USAID SUPPORT FOR LEBANON'S ACCESSION TO THE WORLD TRADE ORGANIZATION PROJECT

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## Executive Summary

LIBNOR is implementing a set of standards on the essential composition and quality factors of honey sold in the domestic Lebanese market. At present, importation of honey into Lebanon is subject to a maximum of 20mg/kg in HMF content, in contrast to the Codex standard and to the limits imposed on domestic producers which are set at 40mg/kg in HMF content. LIBNOR is proposing to amend the current honey regulation in order to comply with the Codex standard and therefore lifting the maximum HMF level condition for imported products.

As part of wider project funded by the United States Agency for International Development (USAID) to strengthen the technical capacity of the public and private sectors, Booz Allen Hamilton worked with Libnor and Lebanese experts to facilitate and guide the development of a Regulatory Impact Analysis (RIA) that evaluates the benefits and costs of altering the standards on the composition and quality factors of honey imported into Lebanon.

The RIA shows an overall benefit to Lebanon from proposed changes to the HMF content requirement in imported honey. Most stakeholders will be beneficiaries from the introduction of the new standard (consumers, government, import companies and retailers), while beekeepers will be the only cost bearers. In the short-term, Lebanese producers are expected to operate at a competitive disadvantage because their honey production facilities are much smaller relative to their international competitors. However, this can be reversed in the long run if local businesses can increase marketing and awareness to the quality of Lebanese honey, increase overall production levels to reduce their unit cost of production, and prepare for potential exporting opportunities abroad.

# Table of Contents

I. Introduction.....	5
II. Background.....	5
III. RIA Methodology.....	6
IV. Identification.....	10
V. Data Collection.....	11
VI. Honey Market Analysis.....	15
VII. Benefits Analysis.....	18
VIII. Cost Analysis.....	21
IX. Cost Benefit Estimation.....	23
X. Conclusion.....	24
XI. Recommendations and Next Steps.....	26

## **I. Introduction**

Regulatory Impact Analysis (RIA) provides a detailed analysis about the potential costs and benefits of regulatory measures to all stakeholders affected by a new or existing regulation.

Booz Allen Hamilton worked with Libnor and Lebanese experts to facilitate and guide the development of a Regulatory Impact Analysis (RIA) that evaluates the benefits and costs of altering the standards on the composition and quality factors of honey imported into Lebanon. This initiative comes under a wider project funded by the United States Agency for International Development (USAID) to strengthen the technical capacity of the private sector in assessing the legal and economic impact of the regulatory tools that affect their business environment and ultimately in the creation of a sound legal and regulatory environment for trade.

## **II. Background**

The Lebanese standard Institution, LIBNOR, is a public institution under the Ministry of Industry. It was established in 1962 and is the sole authority to issue, publish and amend Lebanese standards in several sectors including agro-food<sup>1</sup>. LIBNOR will also be functioning as a World Trade Organization Technical Barrier to Trade enquiry point to answer all applicable enquiries from WTO Member States and other interested parties.

Currently, LIBNOR is implementing a set of standards on the essential composition and quality factors of honey sold in the domestic Lebanese market. These standards discriminate between locally produced and imported honey in the

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<sup>1</sup> <http://www.libnor.org>

maximum HMF (hydroxymethylfurfural) content allowed and are not fully compliant with the international honey standards of the Codex Alimentarius. The Codex Alimentarius is a United Nations Food and Agriculture Organization (FAO) and aims, through a set of published standards, to ensure the safety of traded food products, and to facilitate trade.

At present, importation of honey into Lebanon is subject to a maximum of 20mg/kg in HMF content, in contrast to the Codex standard and to the limits imposed on domestic producers which are set at 40mg/kg in HMF content. As a result, by limiting the HMF content of imported honey to a lower level than that of the Codex standards, Lebanon is imposing a barrier to trade on imported products. Given that Lebanon is bound by the Codex standard and is applying for accession to the WTO, LIBNOR is proposing to amend the current honey regulation in order to comply with the Codex standard and therefore lifting the maximum HMF level condition for imported products.

### **III. RIA Methodology**

A classical RIA analysis is based upon a rigorous cost-benefit analysis framework which estimates the benefits and costs incremental to a set baseline. It aims at quantifying and valuing all the costs and benefits resulting from the adoption of the regulation or in this case the changes intended to the honey standard.

This level of detail and rigor has been difficult to achieve with this RIA due to the lack of consistent and comprehensive data on the honey market and related economic variables. It was therefore decided to restrict the RIA to a simple

qualitative Cost and Benefit Analysis, using a Process Model Worksheet methodology developed by Booz Allen Hamilton.

This approach is used in those instances when quantitative data is not readily available. The PMW presents a step-by-step method for completing a simple analysis. It has a logical flow, asks the key questions, facilitates collection of information, does not rely on quantitative analysis exclusively and is less “data dependent” than other CBA methods. Figures 1 and 2 shows a blank 2 page PMW.

The PMW consists of two pages: the benefits analysis is on one page and the cost analysis is on the second page.

- Box #1 asks you to name the regulation, specify its intended purpose and list key stakeholders.
- Box #2 asks you to specify the intended beneficiaries and state when each beneficiary is expected to realize the intended benefits. We make a purposeful distinction in using the adjective “intended.” The actual benefits expected to result from the regulation may differ significantly from the intended benefits.
- In Box #3, we shift the focus to actual beneficiaries and ask you to identify them, breaking them out into different groups: government, industry and consumer/society. Box 3 asks you to first decide if the beneficiary is a direct beneficiary or indirect/induced, using the definitions provided to the right of Box 3. Box 3 also asks you to rate on a scale of 1 to 5 the actual expected benefit of the proposed regulatory change to that beneficiary, with 1 representing the lowest expected benefit and 5 being the highest expected benefit. We then total the numbers in each column.

- Box 4 allows you to display the levels and trends of the actual expected benefits for each of the three groups of beneficiaries, using the information compiled from Box 3.

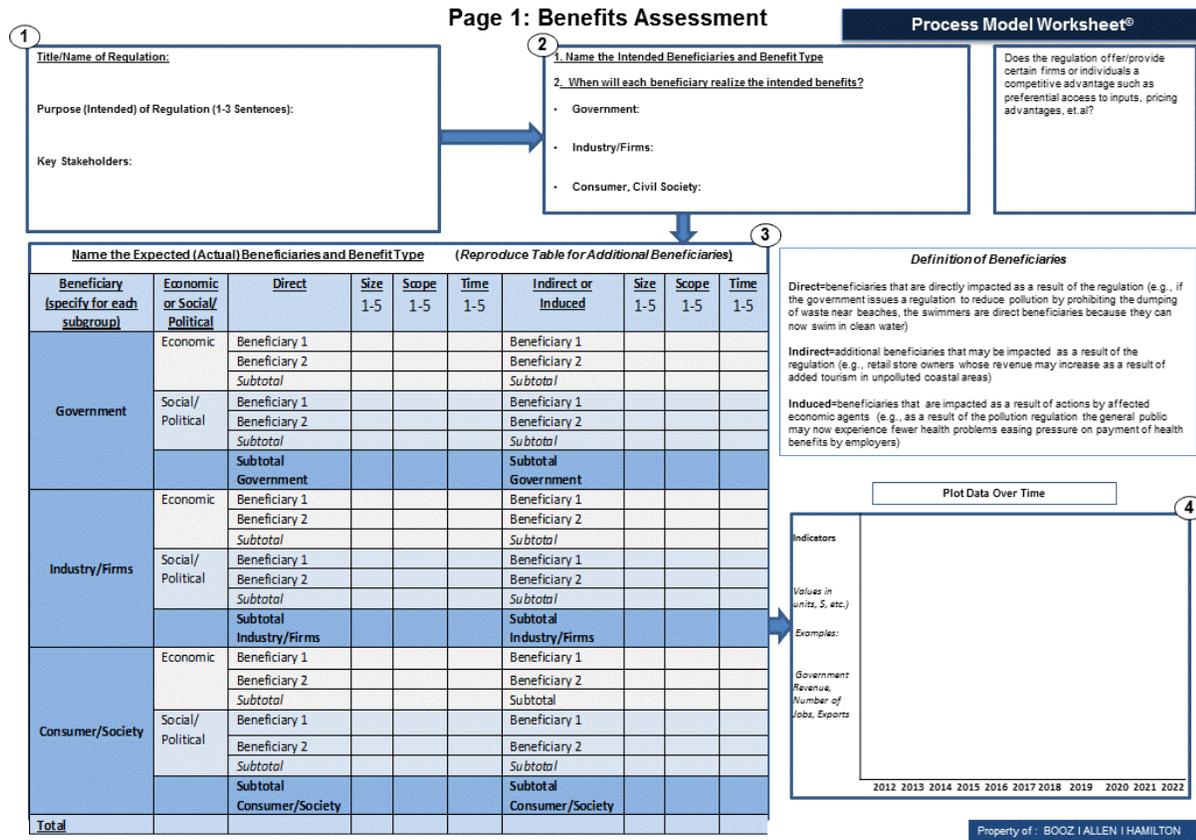


Figure 1: PMW Page 1 Benefits Assessment

Page 2 of the PMW is similar to Page 1 but addresses the costs. This page requests information to be inserted in Box #5 on the intended cost bearer and cost type, i.e., direct, indirect and induced, using the definitions to the right of page.

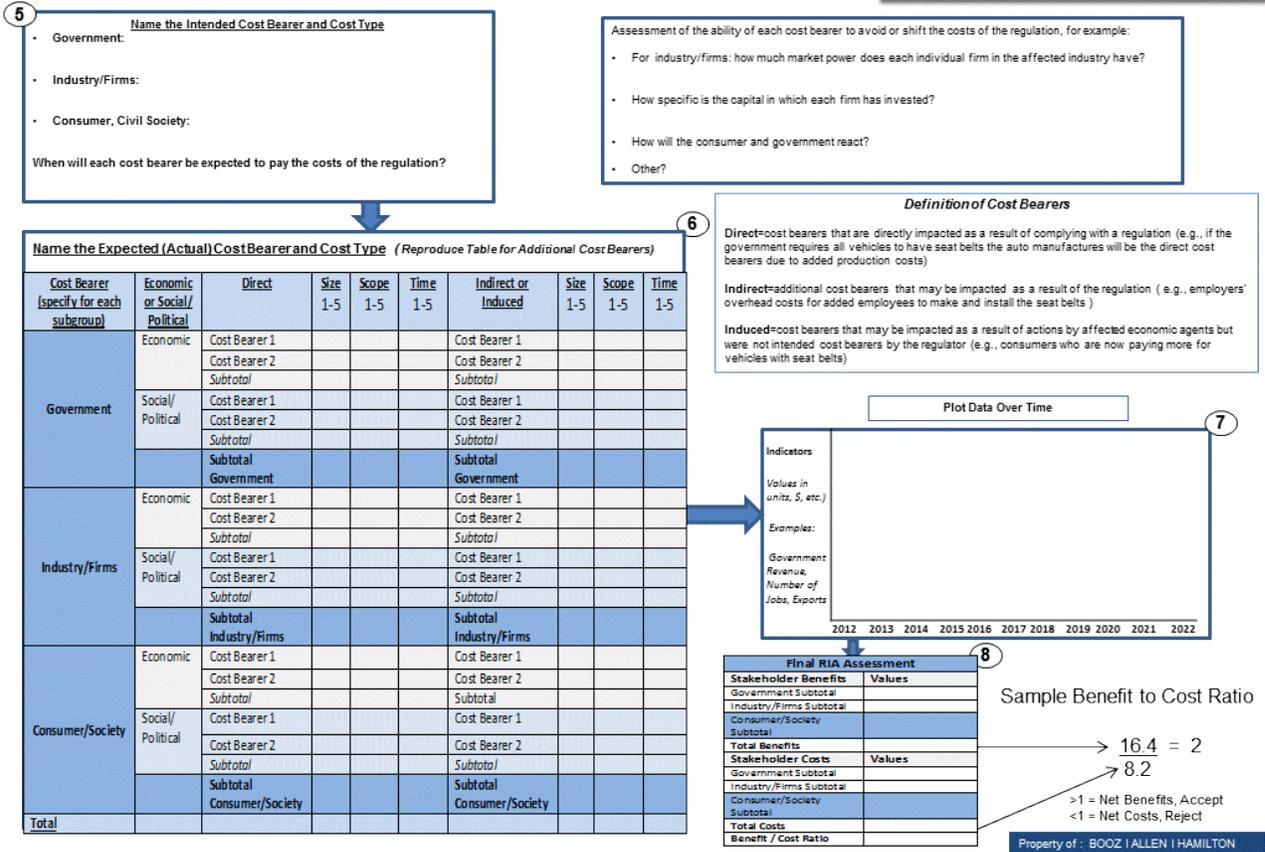


Figure 2: PMW Page 2 Costs Assessment

- Box 5 asks you to note the timeframe during which the cost bearer is expected to pay the costs of the regulation.
- Box 6 is similar to Box 3 (on the Benefits page) but this time focuses on costs.
- Box 7 allows you to display volume/size and trends over time.
- Box #8 brings the benefit analysis and cost analysis together for a simple ratio comparison. Using the sums from Boxes 3 and 6, completion of Box 8 allows you to compare total benefits to total costs. The ratio can also be “flipped,” to show the cost-to-benefit ratio. If the value of the benefit-cost ratio is greater than 1, it means that the expected benefits exceed the expected costs and that the regulatory change is expected to result in net

benefits. If the benefit-cost ratio is less than 1, it means the opposite: the costs exceed the benefits or the regulatory action can be expected to result in net costs if the regulatory change is adopted. This ratio comparison provides a rough estimate of the costs versus the benefits.

The remainder of this document details how we used the PMW methodology in performing this RIA, presents the findings of the analysis and proposes recommendations for next steps.

#### **IV. Identification**

The first step in performing a regulatory impact analysis is to identify the potential stakeholders. The following key stakeholders were identified for this RIA:

- LIBNOR,
- Government and Various Ministries: Agriculture, Economy and Trade, Health,
- Beekeepers,
- Consumers,
- Honey Import Companies,
- Honey Retailers,

Promoting the participation of industry stakeholders throughout the assessment process enabled a more informed and precise assessment of the costs and benefits. Several stakeholders projected to be impacted by the change in standards of honey in Lebanon were invited to working group meetings. The primary purpose of the working group meeting was to engage with stakeholders in different stages of the RIA, collect information and gather their concerns and buy in for this study.

The working group consisted of approximately 15 participants and included representatives of the following stakeholders:

- beekeepers syndicate,
- honey producers and retailers,
- laboratories for testing food and agricultural products ,
- food import companies, and
- independent researchers

Three wide assembly working group meetings were held, where substantive discussions on the honey standards and their impact on stakeholders were collected.

## **V. Data Collection**

### **a. Working Group Meetings**

Working group meetings identified that Lebanese beekeepers are very concerned about the relaxation of the conditions for imported honey. Beekeepers fear that increasing the allowance level for maximum HMF content would introduce new products (imported with HMF between 20 and 40 mg/kg) to Lebanon at lower prices.

They believe the livelihood of all Lebanese beekeepers and production companies is threatened by an expansion of the market for honey. Their main argument against changing the standard is that the size of honey production facilities in Lebanon is small, in contrast to the large scale and highly efficient international producers such as Argentina, China and Mexico. They believe that they cannot

competitively price their locally produced products to compete with these international producers and reducing their profit margins further would drive them out of business.

Producers also identified that Lebanese honey is different than imported honey, containing a special therapeutic and nutritional value. However, and despite those claims, beekeepers believe they cannot competitively price their local production against imported honey with increased HMF content standards.

Independent experts and LIBNOR representatives proposed other means to protect the Lebanese honey production such as special labeling, increased marketing and awareness on the quality of Lebanese honey and government intervention for the growth of the market.

### **b. Literature Review**

In order to evaluate the feedback provided by stakeholders as part of the working group sessions, we explore in this section similar case studies in other specialized international sectors and the possible impacts that the introduction of the proposed standard might have on the local honey production business.

The proposed standard is expected to increase the importation of produce into Lebanon; therefore its impact is comparable to that of an increased liberalization of trade in agricultural products.

### **International Examples of Negative Impacts from Trade Liberalization**

The liberalization of trade in Sri Lanka since the early 1990s has negatively affected the local agriculture sector. By 2000, the market access terms were fairly liberal. Yet, one major challenge was maintaining and improving competitiveness of domestic production sectors as tariffs were lowered. Studies show that there is clear evidence of an unfavorable impact of imports on domestic output of vegetables, notably onions and potatoes. The resulting decline in the cultivated area of these crops due to increased cheaper imports, has affected approximately 300,000 individuals involved in their production and marketing. [FAO12]

Another study conducted in 2000, examined the consequences of trade liberalization of rice on domestic prices and production levels in Sri Lanka. The study showed that with the removal of support for domestic production and full liberalization of trade, domestic prices dropped by 26% and local production of rice fell by 16% [Rafeek and Samaratunga3].

In Senegal's poultry sector, increases in imports have severely impacted local broiler production. Faced with strong competition from low-priced imported poultry, many local producers were forced to exit the industry or convert to other operations. Increased imports revealed the lack of competitiveness of the industry mainly due to poor management, limited access to credit, inadequate infrastructure, little exploration of marketing opportunities and lack of organization. [FAO24]

## **International Examples of Positive Impacts from Trade Liberalization**

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2 FAO Economic and Social Development Department:

<http://www.fao.org/docrep/003/X8731e/x8731e14.htm>

3 Rafeek and Samaratunga. 2000. Sri Lankan Journal of Agricultural Economics. Volume 3, Number 1. Pp 143 - 154.

4 FAO Commodity and Trade Policy: <http://www.fao.org/es/esc/common/ecg/19/en/Surge7Import.pdf>

The impact of trade liberalization has also resulted in positive impacts. Rafeek and Samaratinga's study shows that the decrease in prices results in an overall welfare benefit to the country. While the government and local producers witness losses from imported products, the consumer benefit associated with reductions in prices outweighs those losses (the gain to rice consumer is Rs. 334.57 Million in 1998, losses to rice producer and government is about Rs. 84.21 million and Rs.13.62 million respectively). The implication is that the nation is gaining every year as a result of trade liberalization in the rice market.

Another aspect of liberalization in trade is the positive competitive incentives that the imported products create, forcing domestic producers to increase local production efficiency and thus opening significant opportunities to export. The Ethiopian honey production industry was characterized by a low productivity of the traditional beehive which pushed prices higher than that offered at the international market. Neither processors nor suppliers of honey and other bee products have benefited from positive domestic and large international markets. To increase the competitiveness of the local honey, private companies have, with their own financial resources, embarked on managing projects for organic, ISO and HACCP certification and international accreditation to overcome entry barriers to international markets. The impact for one of the biggest honey producers in Ethiopia was markedly positive; its earnings grew by 25% in 2009 and 28% in 2010 although the international price dropped from \$4 per kg to \$3.40 per kg. The revenue loss from price reductions was compensated by an increase made in the quantity of organic honey collected, processed and exported. Another big honey

producer tripled its earnings in 2010 and was expected to witness a 32% increase in earnings in 2011 [SNVWorld5].

## VI. Honey Market Analysis

There is a significant shortage of information on the honey market in Lebanon, and in related data on the beekeeping profession, honey production, beekeepers income, size of the market, etc.

The data provided below is the only publicly available information that was leveraged for this analysis. This data is grouped into official data collected from the Ministry of Agriculture and unofficial data based on input from stakeholders.

### c. Official Data :

#### **Beekeepers and Beehives**

Year	2005	2007	2009	2012
Number of beekeepers	--	--	--	--*
Number of beehives	132,000	115,000	134,000	194,520

*Source: Ministry of Agriculture*

*\*The survey on the total number of beekeepers in Lebanon for 2012 is not yet completed; the Ministry of Agriculture estimates that the total number of beekeepers without one major Mouhafaza (Mount Lebanon) consisting of 4,643 beekeepers.*

#### **Local Production of Natural Honey**

Year	2005	2007	2009
Total Annual Local Production (Million Tons)	1,095	965	1,045
Average kg production per beehive	8.3	8.4	7.8

*Source: Ministry of Agriculture*

<sup>5</sup>[http://www.snvworld.org/sites/www.snvworld.org/files/publications/impact\\_of\\_certification\\_on\\_sustainable\\_market\\_entry\\_for\\_honey.pdf](http://www.snvworld.org/sites/www.snvworld.org/files/publications/impact_of_certification_on_sustainable_market_entry_for_honey.pdf)

### Average Prices of Natural Honey

Year	2005	2007	2009
Average price of 1 Kg of Honey (LL)	22,870	22,800	27,300
Average price of 1 Kg of Honey (USD) <sup>6</sup>	15.17	15.12	18.11

Source: Ministry of Agriculture

### Import/ Export of Natural Honey

Year	2005	2007	2009	2011*
Total Import (Million Tons)	99	161	220	203
Value of Import (billion LL)	0.8	1.4	2.01	2.29
Value of Import (million USD)	0.53	0.93	1.34	1.52
Total Export (Million Tons)	8	17	32	26
Value of Export (billion LL)	0.07	0.25	0.627	0.50
Value of Export (million USD)	0.05	0.17	0.42	0.33

Source: Ministry of Agriculture

\*Source: Chamber of Commerce

#### d. Non-Official Data from the Beekeeper Syndicate Representative<sup>7</sup>:

#### Beekeepers and Beehives

Year	2011
Number of beekeepers	5538
Number of beehives	168614

Division of Beekeepers	% of the total number of Beekeepers
Professionals (relying solely on beekeeping as income)	30%
Semi Professional (relying partially on beekeeping as income)	40%
Amateur Beekeepers (producing honey and raising	30%

<sup>6</sup> Exchange Rate: 1507L.L./USD for all years under consideration

<sup>7</sup> The non-official data is collected from interviews with the beekeeper syndicate representative Mr. Hussein Awada.

bees as a hobby)	
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Division of Beekeepers	Estimated Number of Beehives
Professionals (relying solely on beekeeping as income)	>150
Semi Professional (relying partially on beekeeping as income)	50-150
Amateur Beekeepers (producing honey and raising bees as a hobby)	<50

### **Local Production of Beekeepers**

Division of Beekeepers	Average production of Beehive per year
Professional Beekeepers	10 -12 kg
Semi Professional Beekeepers	8 -9 kg
Amateur Beekeepers	5 kg

### **Costs of honey production:**

The cost of harvesting one beehive is around 116 USD (the wholesale price of 8kg of honey).

This cost varies depending on the number of beehives that are being harvested by each producer. Given the labor and infrastructure requirements necessary to cultivate honey, as the number of beehives is increased, the unit cost of production for each beehive is reduced. As a result, margins for larger honey producers are higher than smaller producers.

### **Prices of honey:**

- Locally produced honey sold in the supermarket: 20-30 USD/kg.
- Wholesale prices: 12 - 17 USD/kg

- Retailers apply approximately 36% margin on the final retail price for marketing only

Whole sale price reflects very small margins for local small honey producers. Should the wholesale price decrease significantly from an increase of imports for instance, the minimal margins would be squeezed even further, likely driving many of the smaller local honey producers out of business. Given their ability to contain the cost of production through economies of scale, larger honey producers are the most likely to withstand any potential price reductions stemming from increased competition in Lebanon.

## **VII. Benefits Analysis**

### **e. Intended beneficiaries and the respective intended benefits**

The intended beneficiary of this regulatory change is the consumer. The proposed changes to the honey standard increase their access to a wider array of products in the Lebanese market (i.e. imported honey products that have HMF content between 20 mg/kg to 40 mg/kg). The domestic market would therefore be more competitive and the consumer would enjoy a wider array of honey products at competitive prices.

### **f. Who are the actual beneficiaries and what are the respective benefits?**

### **Direct Beneficiaries**

- Consumers: lower prices and wider range of products as a result of the increase in competition

### **Indirect Beneficiaries**

- Government: favorable reputation for the ratification of international trade agreements and accession to WTO
- Import companies: increase market share as a result of importation of a wider range of honey products
- Retailers: the increase in honey consumption will result in higher revenues for domestic retailers.

### **Induced Beneficiaries**

- Government: induced economic growth from international trade agreements (if implemented properly)
- Import companies: additional employment may result from the growth of the honey production sector
- Retailers: Economic growth and sales by the honey sector will result in higher profits, increases in employment and disposable personal income which will be spent at other retailers across Lebanon.

### **g. Benefit Assessment**

**Table 1: Direct Beneficiaries**

	<b>Benefit</b>	<b>Scale (1-4)</b>	<b>Time (S/L)</b>
<b>Consumers</b>	Lower prices	2	S

*Scale (1 -4) = representation of the scale of the benefit: 1 low – 4 high*

*Time (S/L) = start time for recouping the benefit: S - short term / L - long term*

**Table 2: Indirect Beneficiaries**

<b>Indirect Beneficiaries</b>	<b>Benefit</b>	<b>Scale (1-4)</b>	<b>Time (S/L)</b>
<b>Government</b>	Compliance with international trade rules	2	L
<b>Import Companies</b>	More sales	1	S
<b>Retailers</b>	Increase in Sales	0.5	S

*Scale (1 -4) = representation of the scale of the benefit: 1 low – 4 high*

*Time (S/L) = start time for recouping the benefit: S - short term / L - long term*

**Table 3: Induced Beneficiaries**

<b>Induced Beneficiaries</b>	<b>Benefit</b>	<b>Scale (1-4)</b>	<b>Time (S/L)</b>
<b>Government</b>	More employment	1	L
<b>Import Companies</b>	More employment	0.5	L
<b>Retailers</b>	Increase in general sales	0.25	L

*Scale (1 -4) = representation of the scale of the benefit: 1 low – 4 high*

*Time (S/L) = start time for recouping the benefit: S - short term / L - long term*

**Table 4: Total Benefits**

<b>Beneficiaries</b>	<b>Total Benefit-Short term</b>	<b>Total Benefit-Long term</b>
<b>Consumers</b>	+2	
<b>Government</b>		+3
<b>Import Companies</b>	+1	+0.5
<b>Retailers</b>	+0.5	+0.25

## VIII. Cost Analysis

### **h. Intended cost bearers**

There is no intended cost bearer to this new regulation

### **i. Expected/actual cost bearers and the expected/actual costs to be paid**

#### **Direct Cost Bearers**

- **Small Beekeepers:** A higher number of players in the market will drive prices down and result in a decrease in beekeepers profit and eventually can affect their business viability. Small beekeepers may be the first to exit the market.
- **Large local honey producers:** producers of Lebanese honey who have 100's of beehives and who have large production facilities will also experience a decrease in sales and profits following from increased competition from imported products. Because of their large production capabilities they will be able to sustain the increase in competition more than the small beekeepers.

#### **Indirect Cost Bearers**

- **Government:** Less employment and income for people who used to rely on beekeeping
- **Consumers:** less availability of locally produced honey in case the beekeeping and honey production business becomes unprofitable.
- **Honey Packagers and Retailers:** companies who buy locally produced honey from small beekeepers, repackage them and sell them in the supermarkets will witness a decrease in their repackaging and

marketing profit margins resulting from a considerable reduction in the number of small beekeepers.

**j. Cost Assessment**

**Table 5: Direct Cost Bearers**

<b>Cost Bearers</b>	<b>Direct</b>	<b>Scale (1-4)</b>	<b>Time (S/L)</b>
<b>Government</b>			
<b>Small Beekeepers</b>	Less sales / exiting the market	-4	S
<b>Large Honey Producers</b>	Less sales	-2	S

*Scale (1 -4) = representation of the scale of the benefit: 1 low – 4 high*

*Time (S/L) = start time for recouping the benefit: S - short term / L - long term*

**Table 5: Indirect Cost Bearers**

<b>Cost Bearers</b>	<b>Indirect</b>	<b>Scale (1-4)</b>	<b>Time (S/L)</b>
<b>Consumers</b>	Less local honey	-1	L
<b>Government</b>	Less Employment	-1	S
<b>Honey Packagers and Retailers</b>	Less sales / less profit	-1.5	S

*Scale (1 -4) = representation of the scale of the benefit: 1 low – 4 high*

*Time (S/L) = start time for recouping the benefit: S - short term / L - long term*

**Table 6: Total Costs**

<b>Cost Bearers</b>	<b>Total Cost - Short term</b>	<b>Total Cost - Long term</b>
<b>Consumers</b>	-	1
<b>Government</b>	1	-
<b>Small Beekeepers</b>	4	
<b>Large Honey Producers</b>	2	-
<b>Honey Packagers and Retailers</b>	1.5	-

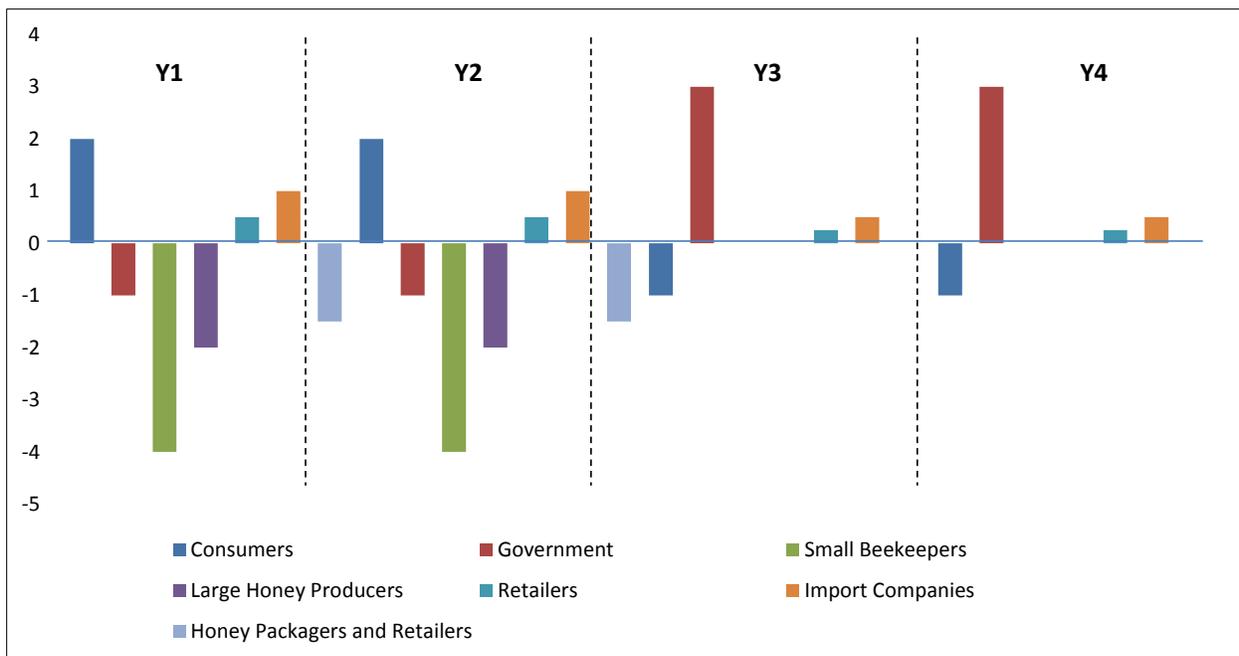
## **IX. Cost Benefit Estimation**

### **k. Net cost and benefit summary**

<b>Cost Bearers</b>	<b>Net Cost - Benefit Short term</b>	<b>Net Cost - Benefit Long term</b>
<b>Consumers</b>	<b>2</b>	<b>-1</b>
<b>Government</b>	<b>-1</b>	<b>3</b>
<b>Small Beekeepers</b>	<b>-4</b>	<b>0</b>
<b>Large Honey Producers</b>	<b>-2</b>	<b>0</b>
<b>Retailers</b>	<b>0.5</b>	<b>0.25</b>

<b>Import Companies</b>	<b>1</b>	<b>0.5</b>
<b>Honey Packagers and Retailers</b>	<b>-1.5</b>	<b>0</b>
<b>Net</b>	<b>-5</b>	<b>2.75</b>
<b>Cost / Benefit Ratio</b>	<b>0.4</b>	<b>3.75</b>

**1. Graphical representation of the net costs and benefits of the proposed standard**



**X. Conclusion**

The analysis shows an overall benefit to Lebanon from proposed changes to the HMF content requirement in imported honey. Most stakeholders will be

beneficiaries from the introduction of the new standard (consumers, government, import companies and retailers), while beekeepers will be the only net cost bearers in the short and long terms.

Consumers are the biggest beneficiaries. As intended by the regulation, they will profit from a wider availability of products at lower prices as a result of a more competitive domestic honey market. The government is also a prime beneficiary. Complying with the Codex standard will enhance Lebanon's reputation and help to facilitate international trade agreements. On the other hand, beekeepers will be facing increased competition from a wider range of imported products. This increase in competition combined with the availability of production facilities available in Lebanon may threaten the viability of domestic honey production businesses and in particular semi-professional beekeepers that have on average between 50 and 150 beehives

In the short-term, with an increase in imports, Lebanese producers are expected to be operating at a competitive disadvantage because their honey production facilities are much smaller relative to the large scale production capabilities available to honey importers. However, this can be reversed in the long run if local businesses can increase marketing and awareness to the quality of Lebanese honey, increase overall production levels to reduce their unit cost of production, and prepare for potential opportunities to sell their specialized honey abroad

## XI. Recommendations and Next Steps

In the interest of gaining domestic private sector support for increasing standards for honey importers, Libnor is recommended to focus on the following stakeholder engagement strategies:

- Libnor and government stakeholders should offer to help provide support and provide access to special labeling facilities, increased marketing and awareness on the quality of Lebanese honey before this regulation is implemented. As an example, Libnor could work to implement a honey rating system that could be used to differentiate the quality of Lebanese honey from cheaper importers, which could be displayed through new labels, increased marketing and awareness. A similar system was developed in New Zealand to help differentiate between different levels of UMF content (measure of antibacterial strength) in Manuka Honey<sup>8</sup>. The rating system is based on the following scale in its measure of antibacterial strength:
  - **0-4:** Not detectable
  - **5-9:** Maintenance levels only (a nice table honey but not recommended for special therapeutic use)
  - **10-15:** Useful levels endorsed by the Honey Research Unit at The University of Waikato
  - **16 and over:** Superior levels with very high activity.

In budgeting and planning for the implementation of a rating system, Libnor should be aware of the additional costs that will be incurred to set up a public organization with the mandate to test and issue these ratings, and providing them with the appropriate infrastructure and testing facilities. All Honey including domestically produced and imported honey would be expected to

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<sup>8</sup> <http://manukahoney.com/resources/umf.html>, Referenced August 2012.

undergo these tests and include these ratings on their labels in order to gain a license to sell their products in Lebanon.

- As Libnor plans their stakeholder outreach component, promotion of this RIA should begin with the “Large” local honey producers that are able to produce in quantities large enough to withstand the temporary price drops expected to be brought on by increased competition. In the short term, Libnor and government stakeholders should reach out to large domestic producers ensuring them that the government will be there to support them through tax incentives from investments in increased production infrastructure, etc. should they be in a position where they can start taking advantage of larger production facilities.
- Libnor should work to educate medium and large honey producers about the potential for increasing exports to international markets that could arise through WTO accession, and how domestic producers can prepare to take advantage of these opportunities.
- Libnor and government stakeholders should work to incentivize large honey producers, to work closely and support their smaller and medium size counterparts by merging operations wherever possible, to ensure the viability of all businesses while allowing the overall honey market to take advantage of larger facilities and economies of scale. In the short term this will allow small honey producers to remain in business. In the long-term, identifying efficiencies in their operations will allow large and medium size honey producers to reduce their unit cost of production to compete with cheaper imports, and to prepare for potential future exporting opportunities abroad.