ESCWA

United Nations Economic and Social Commission for Western Asia

# The Agricultural Sector of Lebanon

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National Consultation on Microinsurance as a Tool for Extending Social Protection

Beirut, Lebanon, 1 October 2013

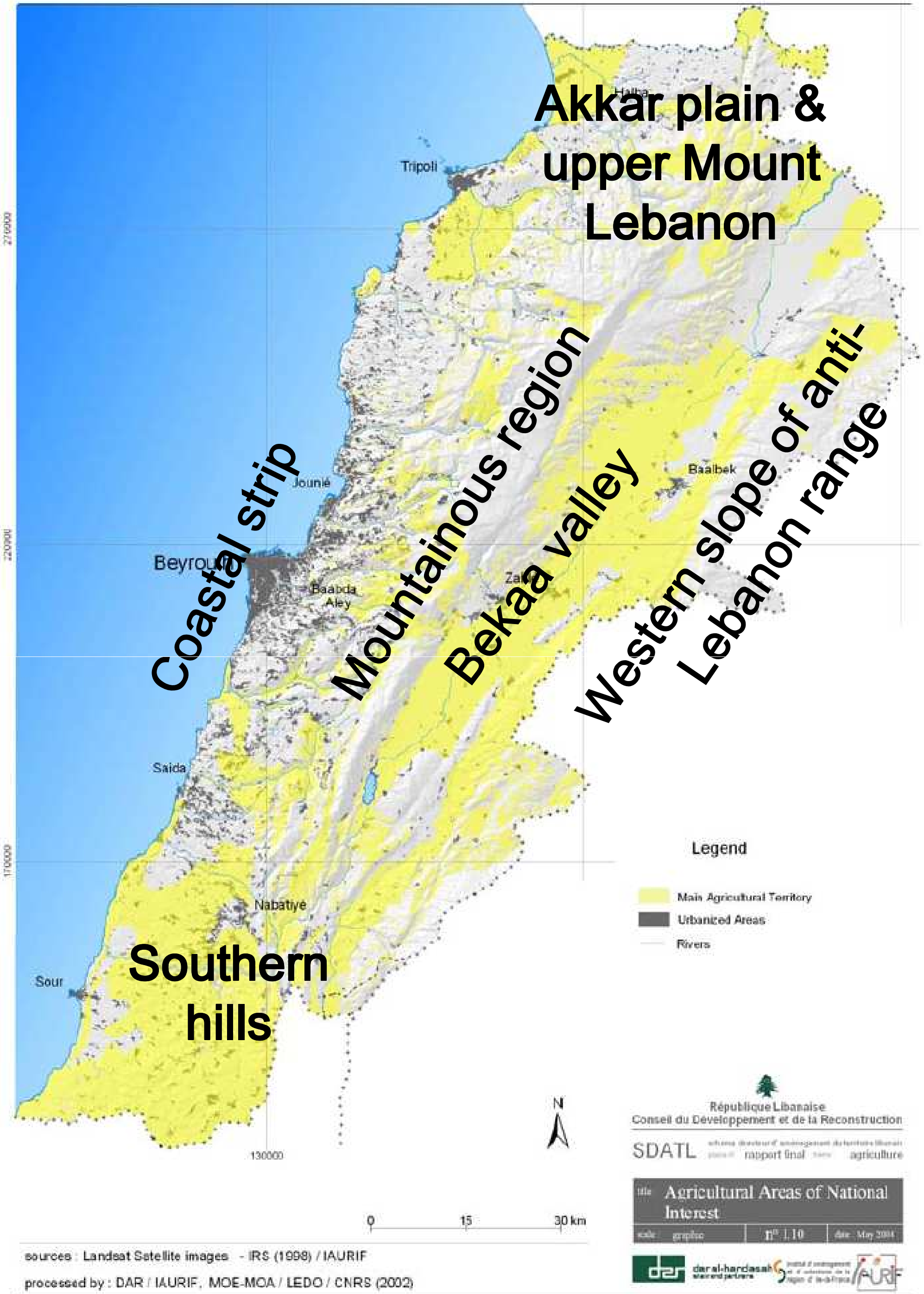
# Agriculture at a glance

| | | Lebanon | ESCWA | Arab region |
|---|---|---|---|---|
| Agricultural area | % total land | 39 | 19 | 24 |
| Irrigated area | % agricultural area | 29 | 6 | 3 |
| Agricultural labor | % total labor | 3 | 22 | 29 |
| Population/agric labor | Pop/Ag labor | 115 | 12 | 9 |
| Agricultural population | % total population | 2 | 24 | 30 |
| Rural population | % total population | 11 | 45 | 45 |
| Fertilizer | Tons/ha | 40 | 27 | 9 |
| Machinery | 1000/Ha | 21 | 3 | 2 |
| Agriculture production | % Growth (base 1999-2001) | (0.3) | | |
| Food production | % Growth (base 1999-2001) | (0.3) | | |
| Agriculture GDP | % GDP | 7 | 6 | 8 |
| Agriculture GDP | Per Agric Population ($) | 14,867 | 1,101 | 861 |
| Wheat | Self-sufficiency ratios (%) | 23 | 59 | 49 |

Source: FAOSTAT (2010)

# Main agricultural areas

- **Coastal strip**: citrus, banana & horticulture & greenhouse production
- **Akkar plain with upper Mount Lebanon**: cereals, potatoes, grapes & vegetables
- **Bekaa valley**: potatoes, grains, fruits & vegetables
- **Mountainous region**: orchards & vegetables
- **Western slope of Anti-Lebanon range**: grapes, olives & cherries
- **Southern hills**: olives, tobacco, almonds & grains

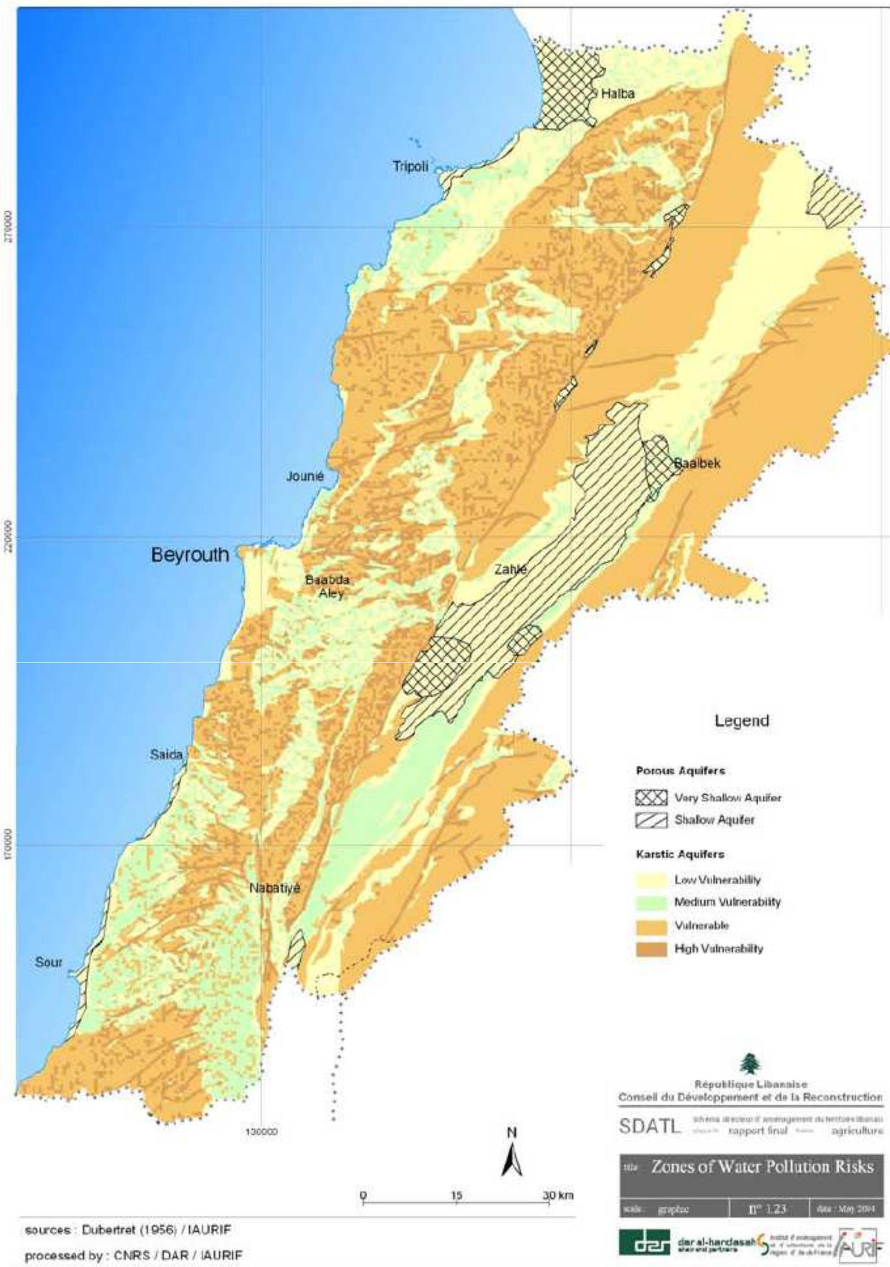



Source: CDR (2005)

# Water vulnerability

| Year | Irrigated area (1000 ha) | Total water ($Mm^3$/year) |
|---|---|---|
| 2005 | 160 | 1,140 |
| 2010 | 190 | 1,280 |
| 2015 | 195 | 1,450 |
| 2020 | 195 | 1,450 |
| 2025 | 212 | 1,272 |
| 2030 | 235 | 1,410 |
| Source: CDR (2005) | | |

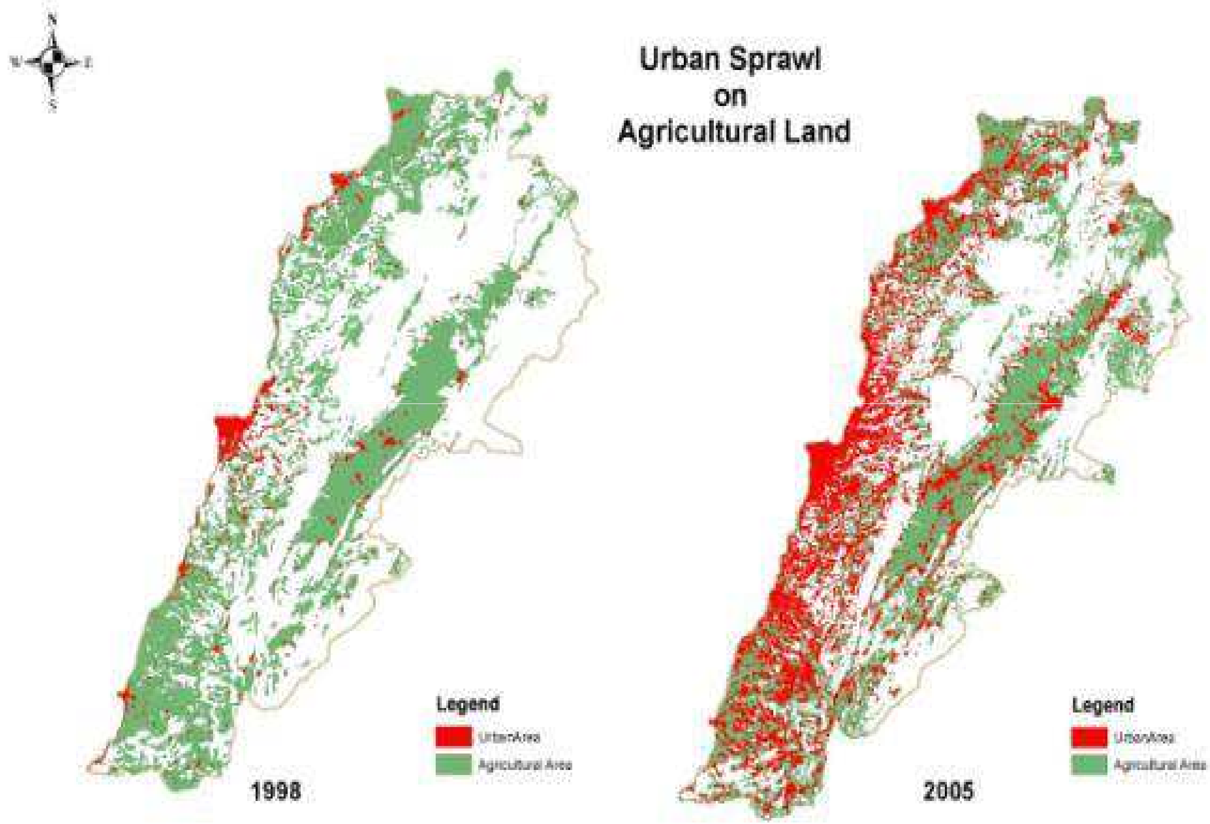
Increasing water scarcity and agriculture intensification should lead to more demand for irrigation




Source: CDR (2005)

# Urbanization risk

- High pressure on cultivated land
- More intensification: more chemical use, increased water for irrigation, etc.
- Increasing water demand to meet water demand in the domestic and industrial sector. MoE estimate that by 2015 a little bit more than 30% of water will be used for other activities




Source: UNDP/MoE (2010)

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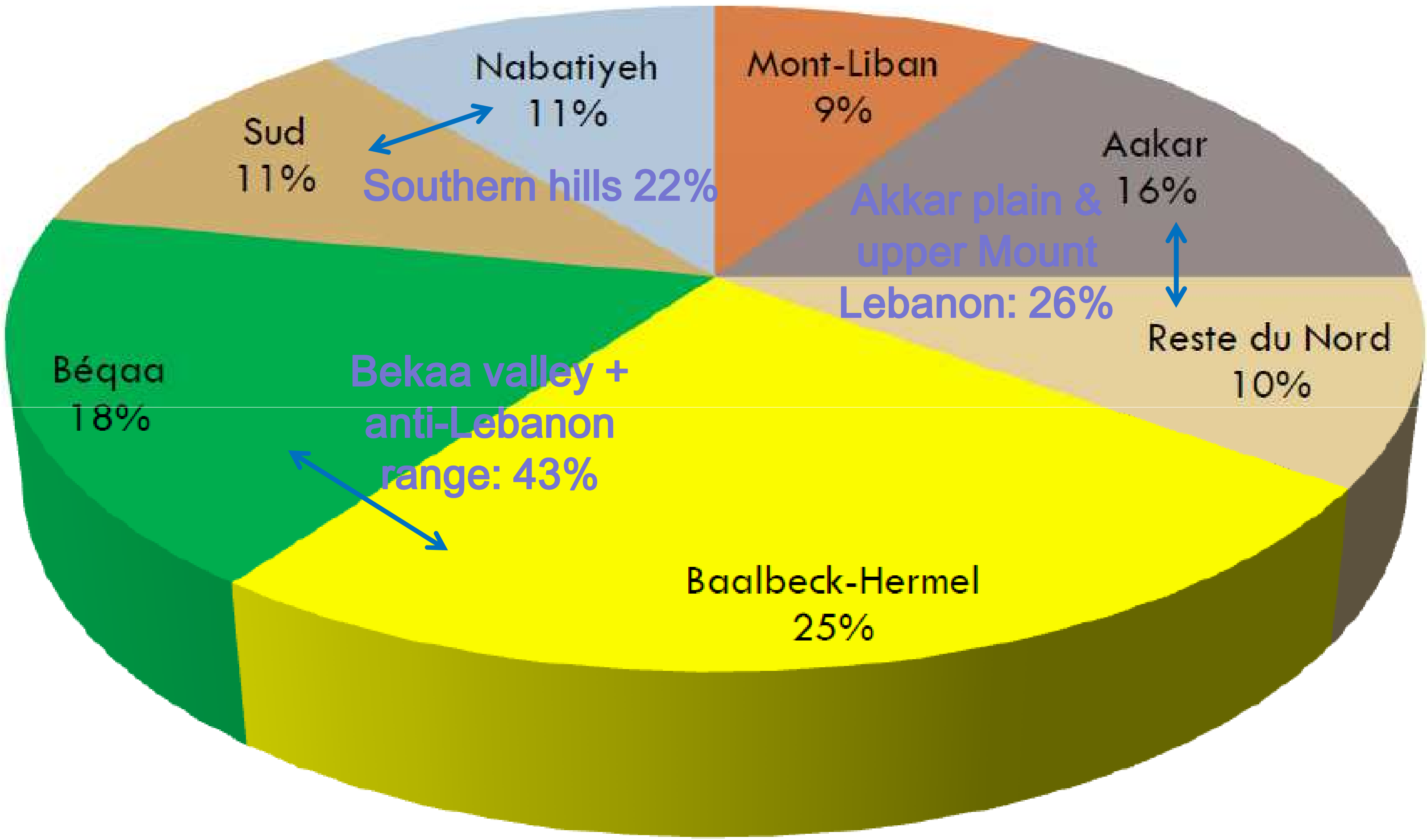
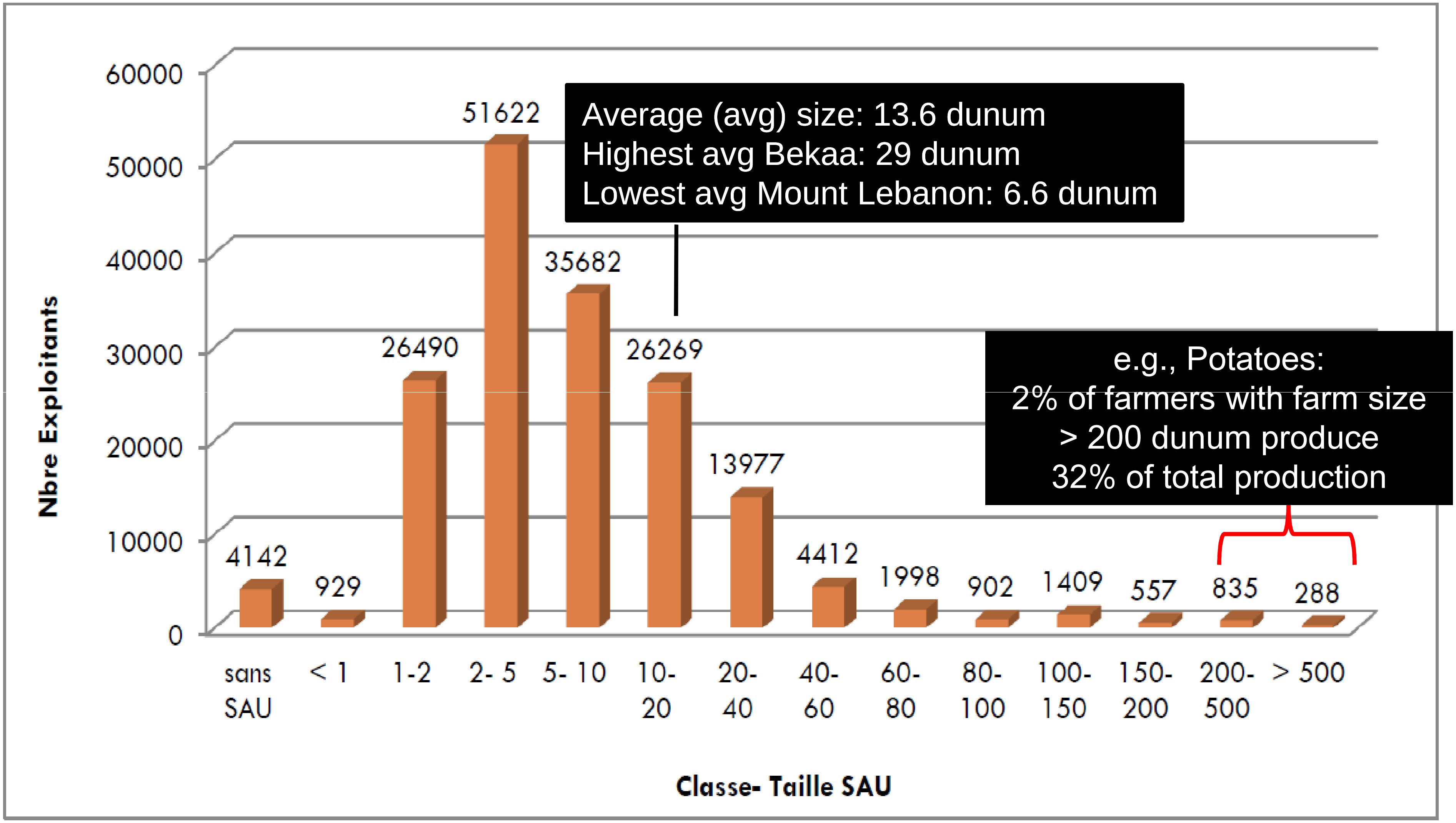
# Distribution of farms




Source: MoA et al (2012)

# Farm sizes




Source: MoA et al (2012)

# Other issues (risks)

- Age: < 35 years 11% & > 65 years: 23%
- Social security: 75% have no access
- Second income: None for about 50%
- Extension services: less than 11% receive it but 86% get it through input providers
- Cooperatives: 96% do not belong to one
- Credit: only 1% of farmers used it
- Irrigation: about 50% use some form of irrigation

Source: MoA et al (2012)

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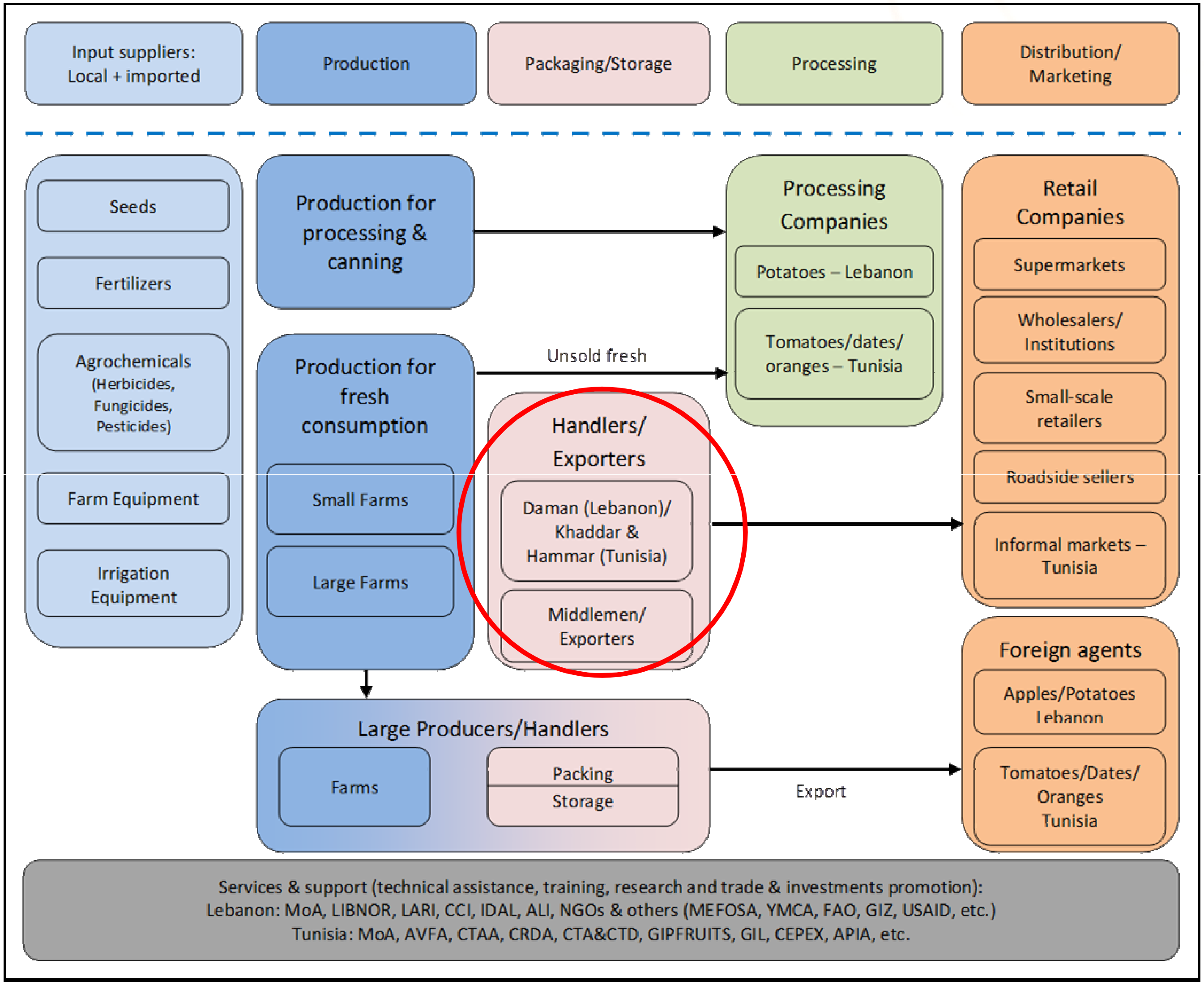
Source: FAOSTAT (2010)

# Agriculture value chain map




Source: ESCWA (Forthcoming)

# Issues in value chains

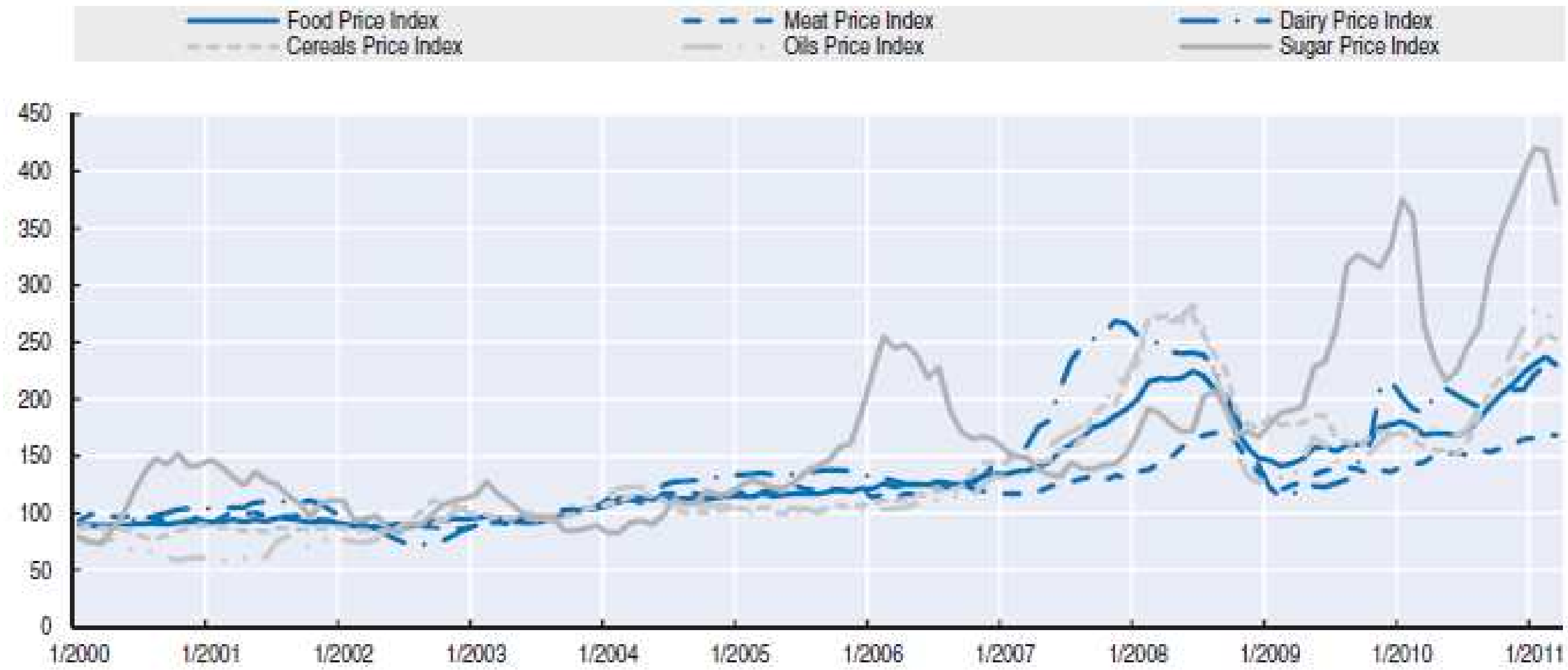
Daman (intermediary):

- Buys entire production well before harvest taking in charge all remaining activities until harvest
- Farmers (mostly small holders) get low prices but are guaranteed a fixed income and early in the season

ALTERNATIVE

- Potential of getting a higher price at the end of the season but at with risk/uncertainty

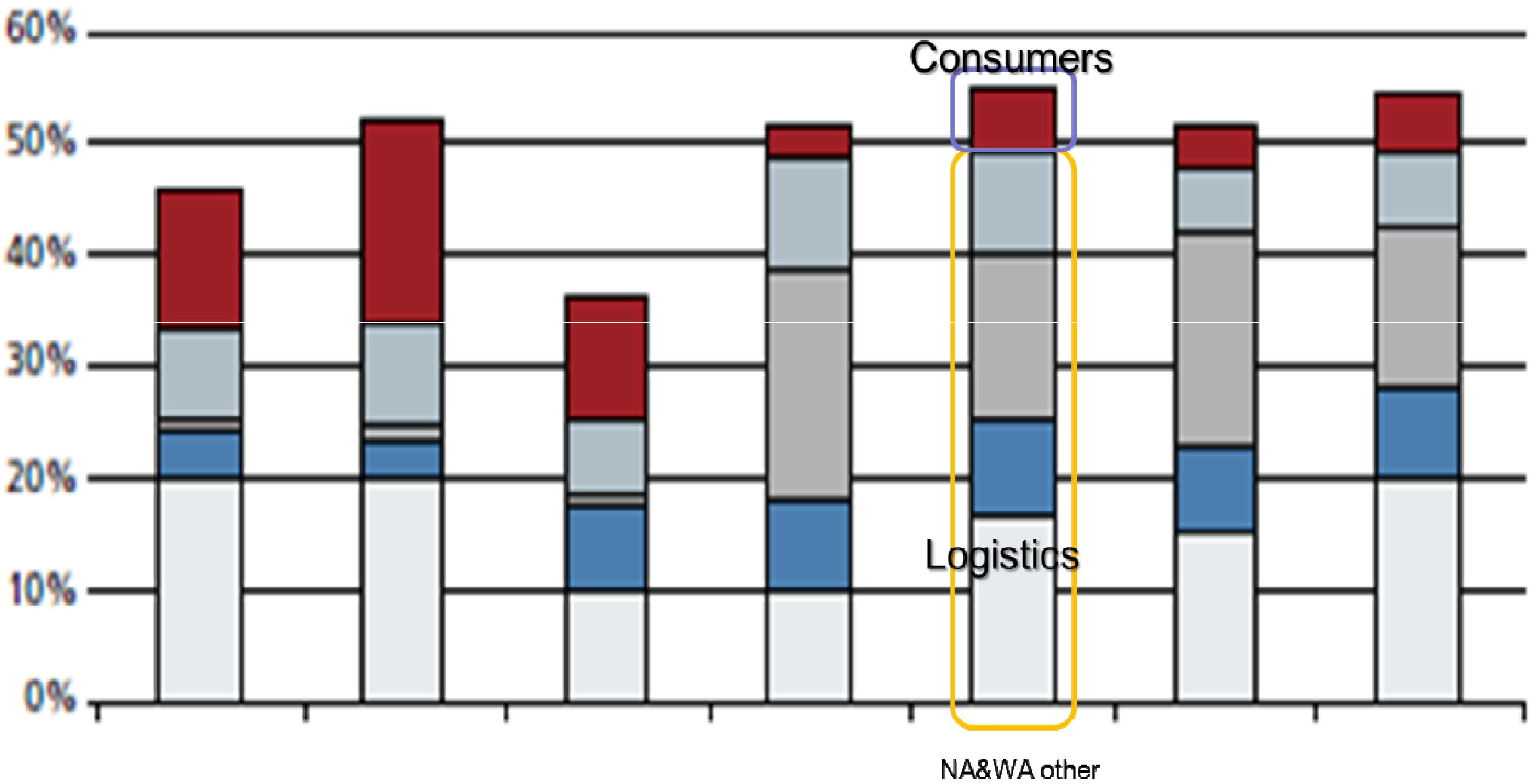
# World agricultural prices




Source: OECD/FAO (2011)

# Losses & wastes

Fruits & vegetables




Source: Adapted from Gustavsson et al (2011)

# Logistic costs

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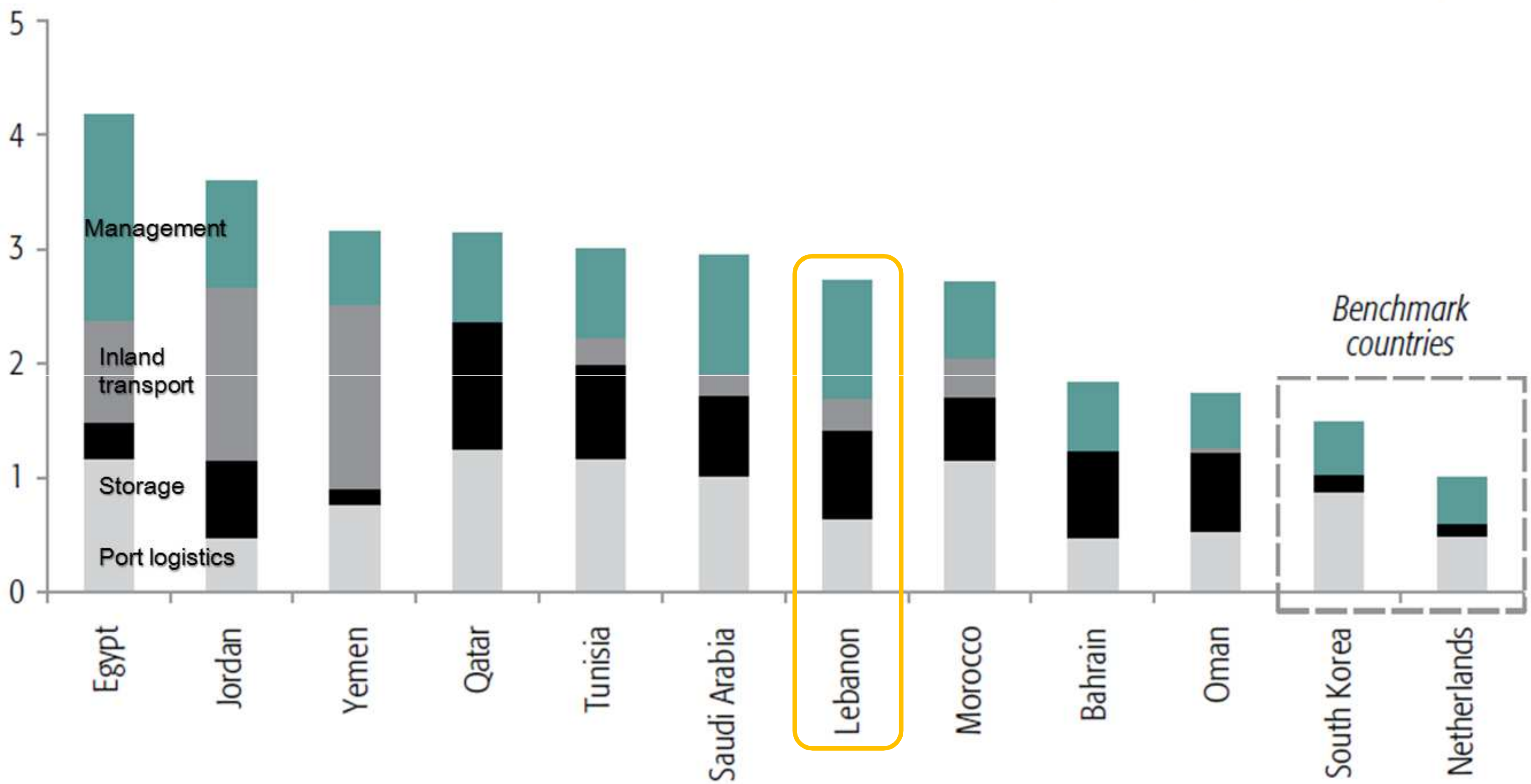


Source: Adapted from World Bank & FAO (2011)

# Role of government

- Setting proper laws and an adequate environment for financing and innovation (innovative financial products)
- Supporting farmers esp. small holders (to access credit and other products)
- Ensuring a good flow of information (particularly towards small farmers)
- Developing & strengthening rural infrastructures

# Concluding remarks

- Impact of climate change will greatly impact agriculture
- Investments (both from private and public sector) are still low given the numerous challenges
- Annual budget to agriculture: 1-3% of annual budget
- Smallness of plots makes agriculture unprofitable

# Thank you!

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# References


FAOSTAT. 2010. http://faostat.fao.org/site/291/default.aspx (last accessed November 2010)

OECD/FAO. 2011. OECD/FAO Agricultural Outlook 2011-2020. OECD Publishing and FAO (http://dx.doi.org/10.1787/agr_outlook-2011-en)

CDR. 2005. National physical master plan of the Lebanese territory: Final report (*www.cdr.gov.lb/study/sdatl/English/NPMPLT-TOC.PDF*)

UNDP/MoE. 2010. Climate risks, vulnerability and adaptation assessment: Final report. Chapter 2: Vulnerability and adaptation of the agriculture sector. Report prepared by ELARD for UNDP/MoE (*www.moe.gov.lb/climatechange/pdf/SNC/a-Agriculture%20sector.pdf*)

MoA, FAO, Coopération Italienne. 2012. Résultats globaux du module de base du recensement de l'agriculture 2010. (http://www.agriculture.gov.lb/html/RESULTATS_RECENCEMENT_AGRICULTURE_2010/RAPPORT_RESULTATS_GLOBAUX_DU_RECENCEMENT_2010.pdf)

United Nations & GIZ. Forthcoming. Green agricultural value chains for improved livelihood in the Arab region. ESCWA, Beirut.

Gustavsson, J., Cederberg, C., Sonesson, U., Otterdijk, R., & Meybeck, A. (2011). Global Food Losses and Food Waste. *Food and agriculture organization of the united nations*.

World Bank & FAO. 2011. The grain chain: Food security and managing wheat imports in Arab countries. Washington, DC