UNITED NATIONS
Office on Drugs and Crime

ROYAUME DU MAROC
LE PREMIER MINISTRE
AGENCE POUR LA PROMOTION ET
LE DEVELOPPEMENT
ECONOMIQUE ET SOCIAL DES
PREFECTURES ET PROVINCES DU
NORD DU ROYAUME

Morocco Cannabis Survey 2005

Executive Summary

January 2007

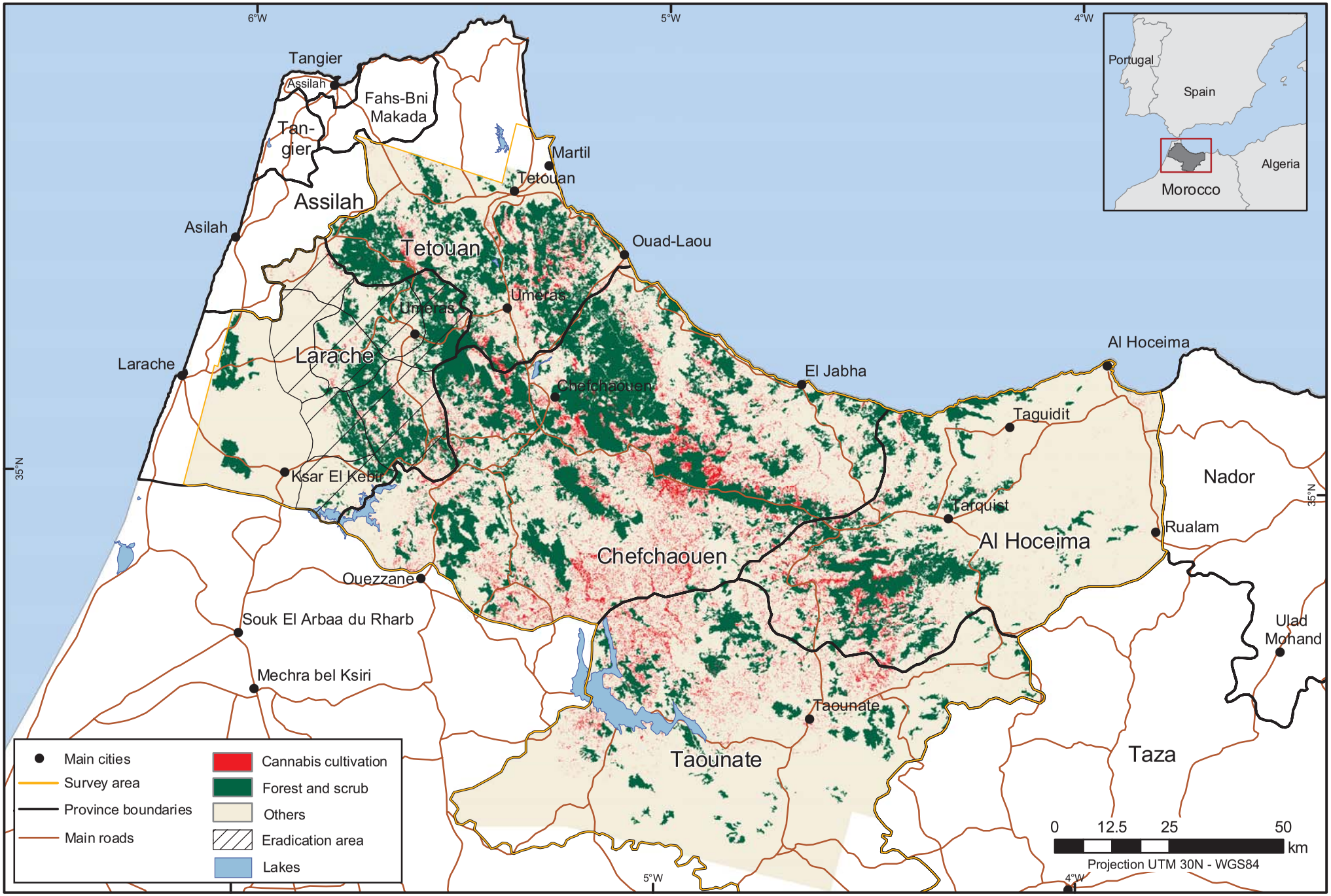
Abbreviations:

Dh	Moroccan Dirham
€	Euro
UNODC	United Nations Office on Drugs and Crime
US$	United States Dollar

The figures and results of the Moroccan Cannabis Survey 2005 were already approved by the Government of Morocco as well as by UNODC, and published in the World Drug Report 2006. However, the final report, on which this executive summary is based, has not yet been formally approved by the Moroccan authorities.

The boundaries and names shown and designations used on the maps of this publication do not imply official endorsement or acceptance by the United Nations.

Morocco - Northern Provinces: Cannabis Cultivation, 2005



Source: Government of Morocco/UNODC Cannabis Survey 2005

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FACT SHEET

	2004	Variation	2005
Cannabis cultivation	120,500 ha	-40%	72,500 ha
On rain-fed land (*bour*)	88%		80%
On irrigated land	12%		20%
Cannabis yield			
On rain-fed land (*bour*)	750 kg/ha	-39%	459 kg/ha
On irrigated land	1,270 kg/ha	43%	1,821 kg/ha
Gross cannabis production	98,000 mt	-46%	53,300 mt
Cannabis extraction rate	2.82 %	-29%	2.0%
Potential production of cannabis resin	2,760 mt	-62%	1,066 mt
Distribution of farm gate sales			
Sale of raw cannabis	66 %	-32%	45%
Sale of cannabis resin	34 %	62%	55%
Cannabis sale price			
For raw cannabis	25 Dh/kg	100%	50 Dh/kg
For cannabis resin	1,400 Dh/kg	186%	4,000 Dh/kg
Total farmers income from cannabis	Dh 2.9 billion	21%	Dh 3.5 billion
	US$ 325 million	19%	US$ 386 million
	€ 263 million	24%	€ 325 million
Number of households cultivating cannabis	n/a		89,900
Average gross household income from cannabis per year	Dh 30,000	30%	Dh 38,900
	US$ 3,300	30%	US$ 4,300
	€ 2,700	33%	€ 3,600
Seizures in Morocco			
Of raw cannabis	319 mt	-64%	116 mt
Of resin	87 mt	11%	97 mt
Annual turnover of international trade in cannabis resin of Moroccan origin	US$ 13 billion	-57%	US$ 5.6 billion
	€ 10.8 billion	-57%	€ 4.6 billion

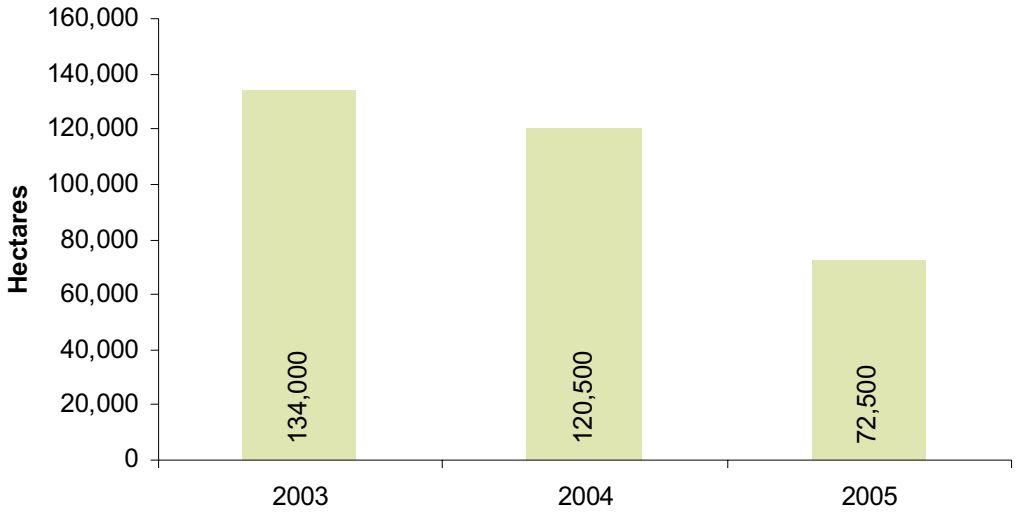
EXECUTIVE SUMMARY

The Morocco Cannabis Survey 2005 was implemented by the Government of Morocco with support from UNODC's Illicit Crop Monitoring Programme (ICMP). The objective of ICMP is to assist the international community in monitoring the extent and evolution of illicit crops, namely coca bush, opium poppy and cannabis, in the context of the elimination objective adopted by the General Assembly Special Session on Drugs in June 1998.

Despite decreases in the area under cannabis cultivation for the second consecutive year, Morocco remains on of the main producers of cannabis resin (hashish) in the world. It supplies primarily the European market. The Northern Region of Morocco, where most of the cannabis cultivation is concentrated, is spread over five provinces and covers an area of roughly 20,000 square kilometres.

The survey area covered the Rif region in the North of the country. Using SPOT satellite imagery, the area under cannabis cultivation was estimated at 72,500 hectares, which is a decline of 40% compared to 2004. This significant decrease was the result of the combined effects of adverse weather conditions, an awareness campaign by the Government to convince farmers to give up cannabis cultivation, and eradication activities.

Figure 1: Cannabis cultivation (hectares), 2003 to 2005



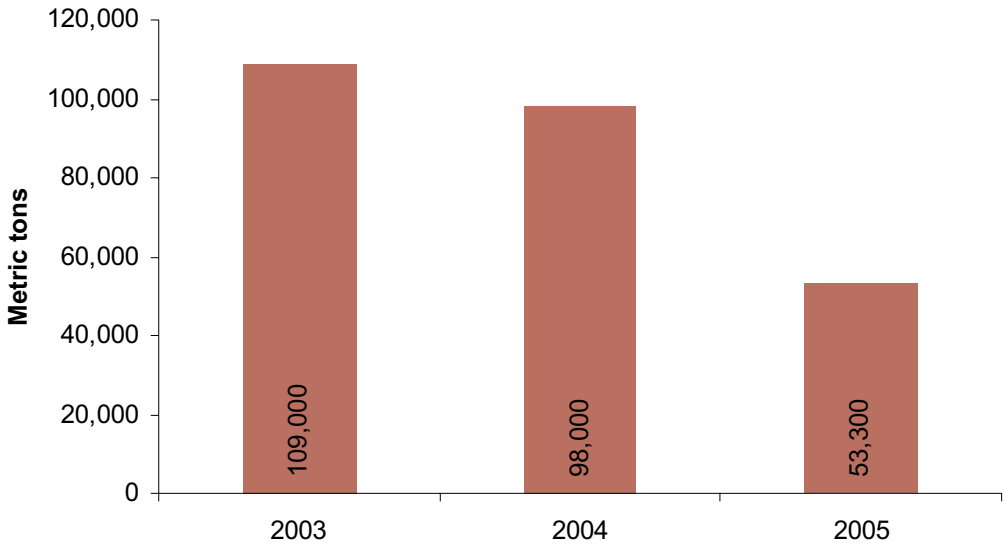
The reduction was most pronounced in the province of Chefchaouen, where the area under cannabis cultivation decreased from 79,195 hectares (2004) to only 40,529 hectares (2005). This corresponds to a decrease by 46%. Despite this encouraging reduction, the province remains the largest cannabis producing province, and contributes to 56% of the total cannabis area in the country.

Table 1: Cannabis cultivation by province (hectares), 2005

Province	Cannabis (ha) 2005	As % of total cannabis cultivation 2005
Chefchaouen	40,529	56%
Taounate	12,362	17%
Al Hoceima	11,671	16%
Tetouan	7,916	11%
Larache	*(eradicated)*	0%
Total (rounded)	**72,500**	**100%**

The potential gross cannabis production was estimated at 53,000 metric tons in 2005. This is a decrease by 46% compared to 2004 (98,000 metric tons). This decrease is a result of the decrease in area under cannabis cultivation. The impact of an increased proportion of irrigated cannabis fields, which usually have much higher yields than rain-fed fields, was negligible as irrigated fields had only a share of 20% of the total cannabis area.

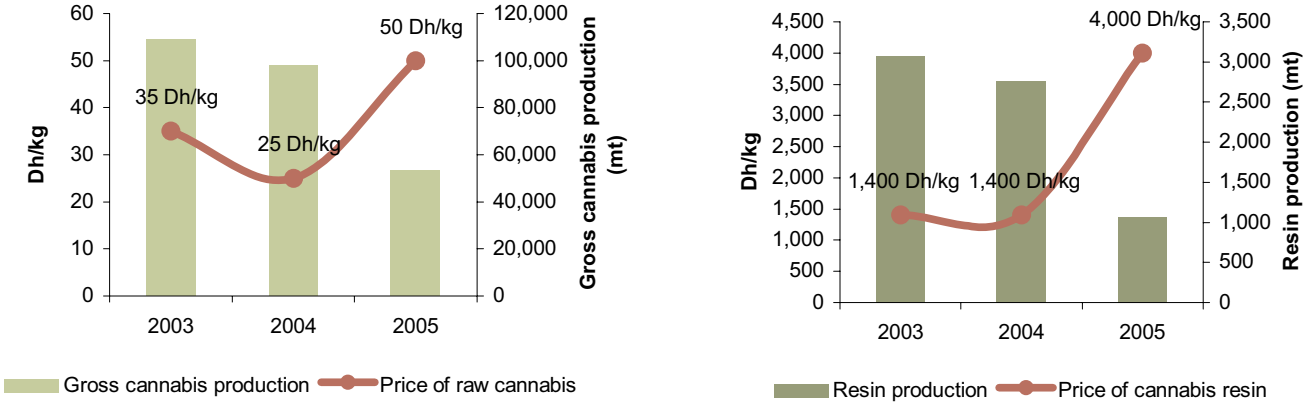
Figure 2: Gross cannabis production (metric tons), 2003 to 2005



Assuming that all the cannabis was transformed into cannabis resin with a ratio of 2 kg of resin per 100 kg of raw cannabis, the total potential production of cannabis resin was estimated at 1,066 metric tons in 2005. This is a decrease by 61% compared to 2004 (2,700 metric tons). The decrease in potential resin production is more pronounced than for raw cannabis due to a lower resin extraction ratio compared to 2004.

Cannabis prices doubled in 2005, from 25 Dh/kg (2004) to 50 Dh/kg (2005) for raw cannabis, as a result of the decreases in production. Prices for cannabis resin almost tripled from 1,400 Dh/kg (2004) to 4,000 Dh/kg (2005). Farmers processed a larger proportion of their raw cannabis harvest into resin (55%) for sale, which, together with the high price for cannabis resin, led to a overall increase by 21% in farmers income from cannabis in 2005. The total farmers income from the sale of cannabis was 3.5 billion dirham (US$ 386 million or € 325). This amount is equivalent to 0.8% of the GDP in 2004 (Dh 443.67 billion).

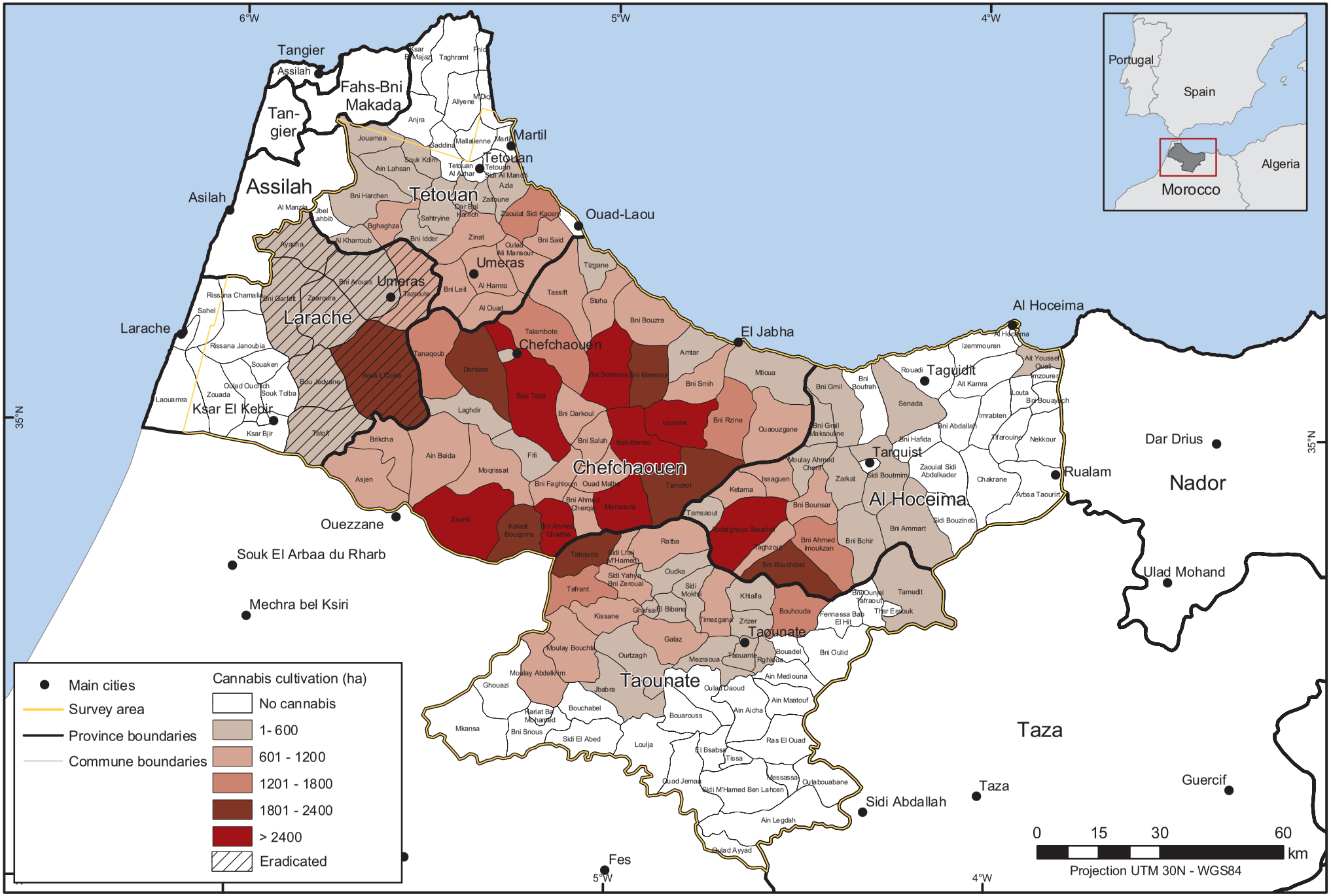
Figure 3: Prices and production of cannabis and cannabis resin, 2003 to 2005



With an estimated number of 89,000 households cultivating cannabis in 2005, the gross annual income from cannabis per household amounts to Dh 38,900 (US$ 4,300 or € 3,600). Based on an average of 8.5 persons per household, about 760,000 persons were involved in cannabis cultivation in 2005.

The annual turnover of international trade in resin of Moroccan origin was estimated at US$ 5.5 billion (€ 4.6 billion).

Morocco - Northern Provinces: Cannabis Cultivation by Commune, 2005



Source: Government of Morocco/UNODC Cannabis Survey 2005

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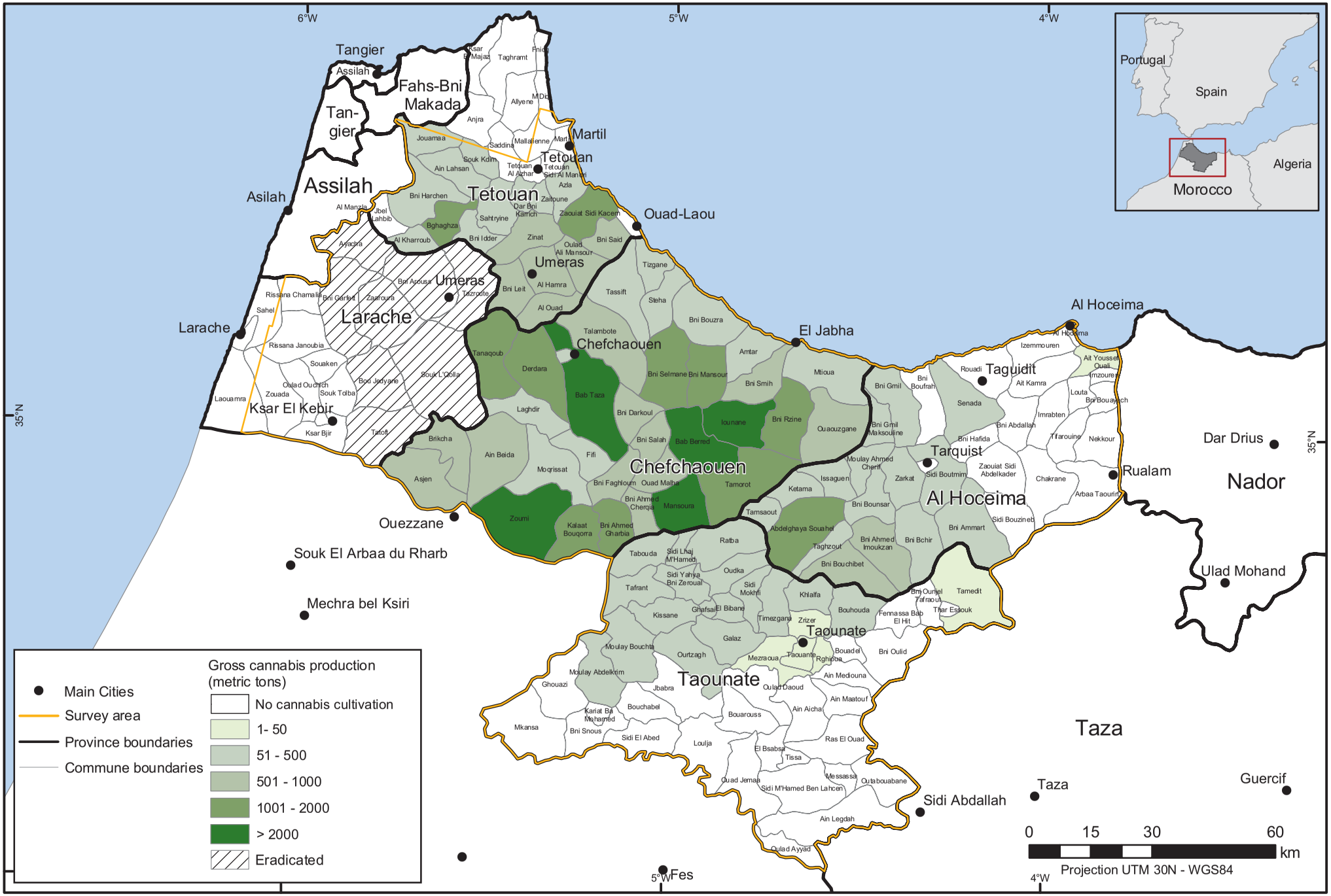
Morocco - Northern Provinces: Gross Cannabis Production by Commune, 2005



Source: Government of Morocco/UNODC Cannabis Survey 2005

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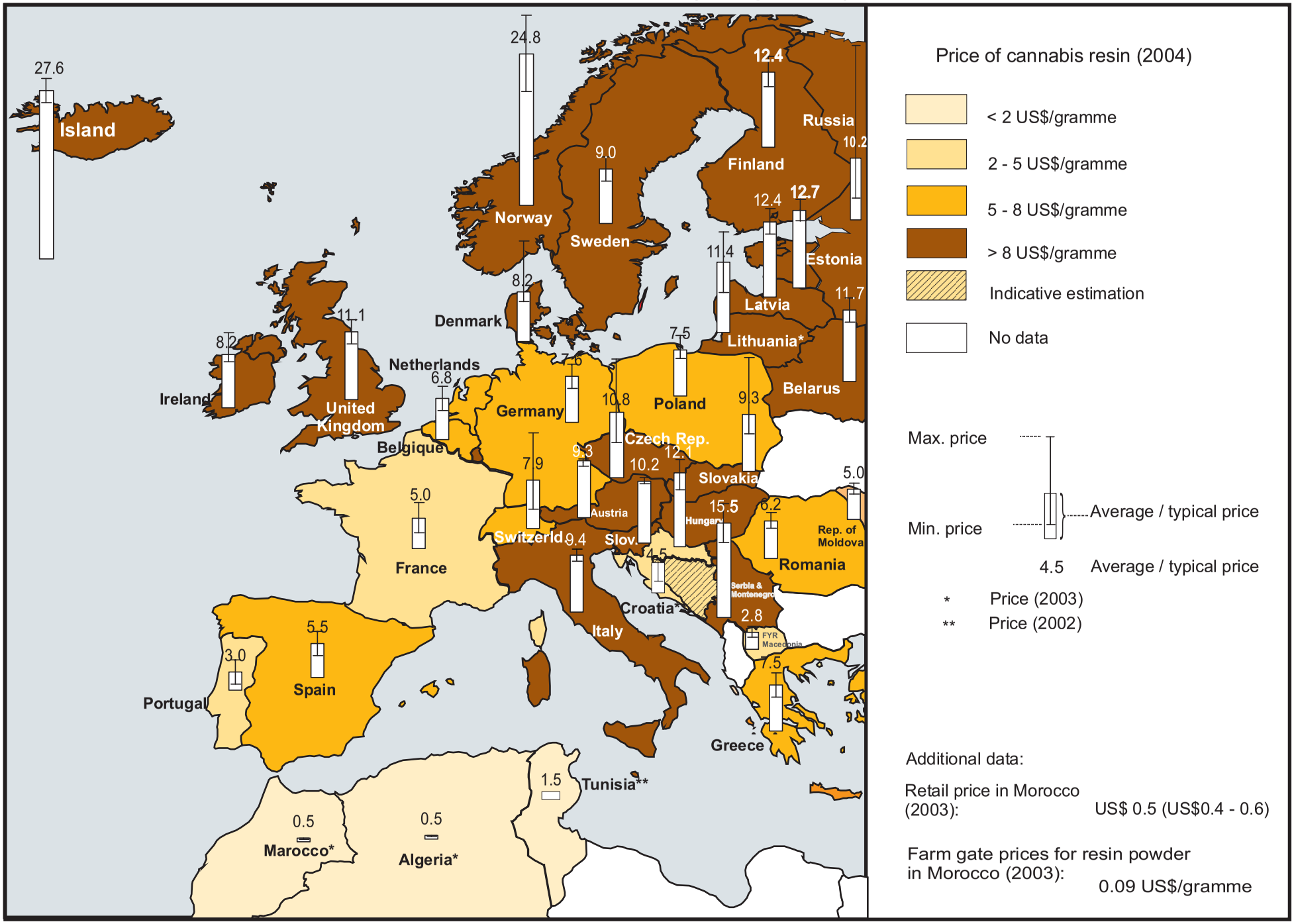
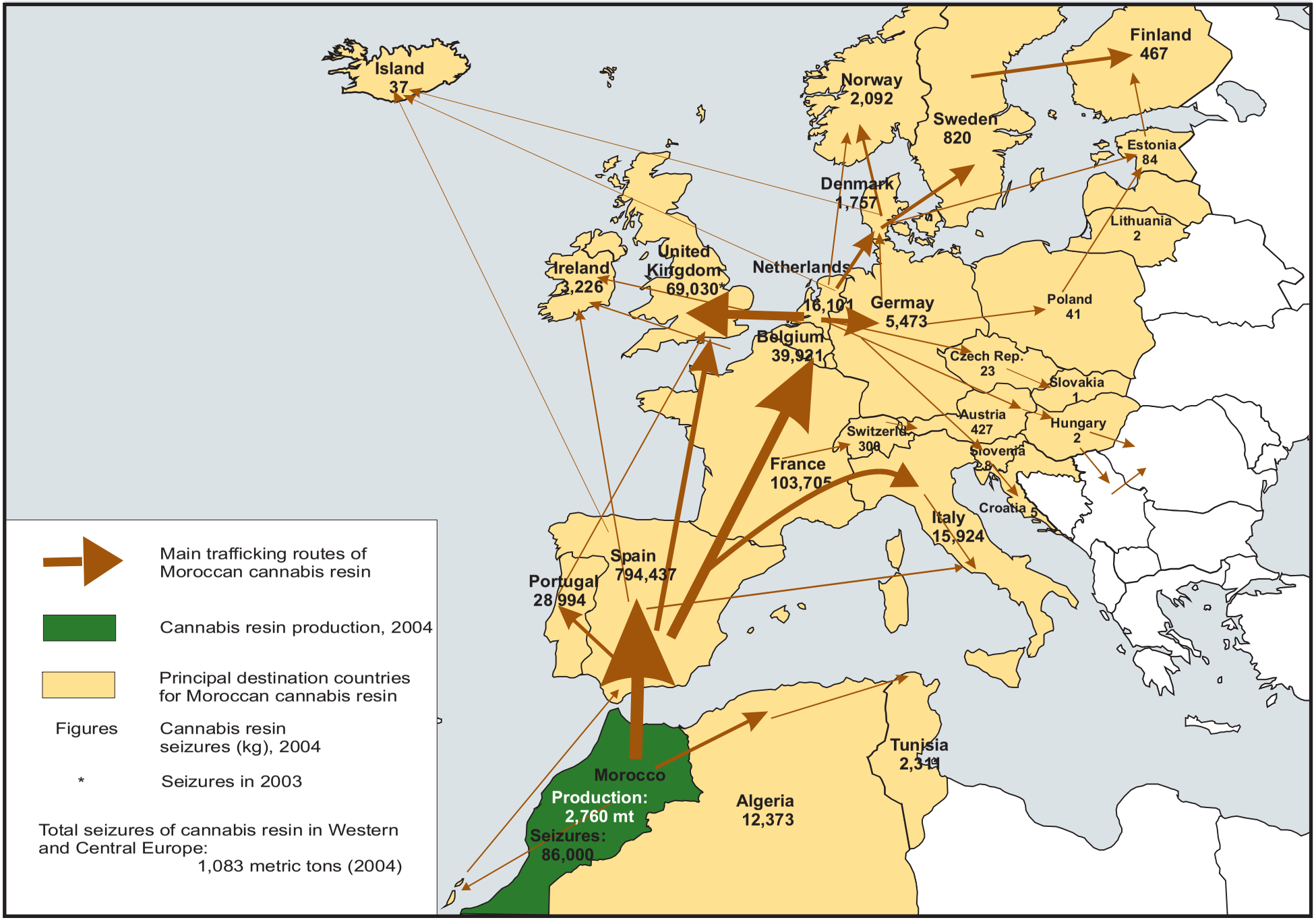
Retail prices for cannabis resin in North Africa and in Europe (US$/gramme), 2004



Source: UNODC Annual Report Questionnaire and EUROPOL. The boundaries, names and designations used in this map do not imply official endorsement or acceptance by the United Nations.

Main trafficking routes of Moroccan cannabis resin, 2004



Sources: UNODC Annual Reports Questionnaire, Morocco Cannabis Survey Report 2004.
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