



## Trade to medicinal plants contradictory on biodiversity in Zagros rangeland, Iran (Khosroshirin village)

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### Abstract

Medicinal plants play a central role, not only as traditional medicines used in many cultures, but also as trade commodities which meet the demand of often distant markets. In this paper, we review global trends in the close relationship between cultivation and wild harvest of MAP species, and then make recommendations on steps that should be taken to achieve a balance between consumption, conservation and cultivation. We absorbed the plan of management of forest and rangeland of khosroshirin after 15 years of performance of plan. The plan involve cultivation of medicinal plant and some tress. In this context, cluster level meetings were organized with farmers, traders, herbal healers, public representatives, experts, women self-help groups, and nongovernment organizations and officers from government departments. Wild harvesting of MAP will continue to prevail due to the economic reasons outlined above. Sustainable wild harvest management schemes need to be supported by governments and authorities. Management plans need to be established as a standard prerequisite for any such harvesting in the wild. There is a need to monitor and audit the harvesting process to determine whether it is sustainable. Identifying the conservation benefits and costs of the different production systems for MAP should help guide policies as to whether species' conservation should take place in nature or the nursery, or both.

**Keywords:** Cultivation of medicinal plants, Conservation of biodiversity, Trade, Khosroshirin village, Agroforestry, Fars, Iran

### Introduction

Presently, once again the use of medicinal and aromatic plants has grown increasingly due to factors such as, human beings' tendency towards nature and organic products, side effects of the synthetic materials, and the discovery of new drugs from natural compounds which have complex chemical structures and cannot be synthesized. The tendency to and regards for natural products have led to the rise in the use of medicinal and aromatic plants and other natural compounds in different food, drug, health and cosmetic industries and products.

Since time immemorial, people have gathered plant and animal resources for their needs. Examples include edible nuts, mushrooms, fruits, herbs, spices, gums, game, fodder, fibers used for construction of shelter and housing, clothing or utensils, and plant or animal products for medicinal, cosmetic or cultural uses. Even today, hundreds of millions of people, mostly in developing countries, derive a significant part of their subsistence needs and income from gathered plant and animal products [11; 26]. Gathering of high value products such as mushrooms (morels, matsutake, truffles) and medicinal plants (ginseng, black cohosh, and goldenseal) also continues in developed countries for cultural and economic reasons [16].

Among these uses, medicinal plants play a central role, not only as traditional medicines used in many cultures, but also as trade commodities which meet the demand of often distant markets. For the purpose of this paper the term "medicinal and aromatic plant" (MAP) is defined to cover the whole range of plants used not only medicinally sensu strictu but also in the neighboring and often overlapping fields of condiments, food and cosmetics.

Demand for a wide variety of wild species is increasing with growth in human needs, numbers and commercial trade. With the increased realization that some wild species are being over-exploited, a number of agencies are recommending that wild species be brought into cultivation systems [4; 21; 23]. Cultivation can also have conservation impacts, however, and these need to be better understood. Medicinal plant production through cultivation, for example, can reduce the extent to which wild populations are harvested, but may also lead to environmental degradation and loss of genetic diversity as well as loss of incentives to conserve wild populations [3]. The relationship between in situ and ex situ conservation of species is an interesting topic with implications for local communities, public and private land owners and managers, entire industries and, of course, wild species. Identifying the conservation benefits and costs of the different production systems for MAP should help guide policies as to whether species' conservation should take place in nature or the nursery, or both [5].

In this paper, we review global trends in the close relationship between cultivation and wild harvest of MAP species, and then make recommendations on steps that should be taken to achieve a balance between consumption, conservation and cultivation.