Austrian National Report 2004

on the

Implementation of the Memorandum of Understanding on the Conservation and Management of the Middle-European Population of the Great Bustard (*Otis tarda*)
Compiled by: **Mag. Rainer Raab** (Technical Bureau for Biology Mag. Rainer Raab; Coordinator of the Austrian Great Bustard Conservation Project and surveillance officer for most great bustard sub-populations in Austria; rainer.raab@gmx.at)

Agreed with: **Dr. DI Enrica Seltenhammer** (Federal Ministry of Agriculture, Forestry, Environment and Water management of Austria (BMLFUW); enrica.seltenhammer@lebensministerium.at)

**Mag. Dr. Andreas Ranner** (Conservation Department of the Government of Burgenland; andreas.ranner@bgld.gv.at)

**Mag. Claus Stundner** (Office of the Provincial Government of Niederösterreich (Lower Austria), Nature Protection Department; claus.stundner@noel.gv.at)

**Dir. Kurt Kirchberger** (Lake Neusiedl National Park; natpark.seewinkel@utanet.at)

**Dr. Gerald Dick** (WWF Austria; Gerald.Dick@wwf.at)

**Dr. Michael Dvorak** (BirdLife Austria; michael.dvorak@birdlife.at)

**Dr. Hans Peter Kollar** (Pannonic Society for Great Bustard Preservation (PGG); hanspeterkollar@aon.at)

Photos by: **Ing. Franz Kovacs & Dr. Josef Timar**

Commissioned by the Federal Ministry of Agriculture, Forestry, Environment and Water management of Austria (BMLFUW), Stubenbastei 5, A-1010 Wien, © 2004
Table of Contents

1. Habitat protection ..................................................................................................................4
  1.1 Designation of protected areas ........................................................................................4
  1.2 Measures taken to ensure the maintenance of Great Bustard habitats outside protected areas. .........................................................................................................................6
  1.3 Measures taken to avoid fragmentation of Great Bustard habitats.................................10
2. Prevention of hunting, disturbance and other threats ..........................................................10
  2.1 Hunting ..........................................................................................................................10
  2.2 Prevention of disturbance ..............................................................................................10
  2.3 Other threats to the Great Bustard ..................................................................................11
3. Possession and trade ............................................................................................................12
4. Recovery measures .............................................................................................................12
  4.1 Captive breeding in emergency situations ......................................................................12
  4.2 Reintroduction ...............................................................................................................13
  4.3 Monitoring of the success of release programs ..............................................................13
5. Cross-border conservation measures ..................................................................................14
6. Monitoring and research ......................................................................................................15
  6.1 Monitoring of population parameters and of the effects of management measures .....15
  6.2 Promotion of research which is of direct application to the conservation of the Great Bustard .................................................................................................................................17
7. Training of staff working in conservation bodies ...............................................................17
8. Increasing awareness of the need to protect Great Bustards and their habitat ....................18
  8.1 The Great Bustard as a flagship .....................................................................................18
  8.2 Increasing the awareness of farmers and shepherds ......................................................18
  8.3 Improving public awareness .........................................................................................19
9. Economic measures .............................................................................................................19
10. Threats ...............................................................................................................................19
11. Achievement of country-specific aims for Austria ............................................................20
12. Bibliography ......................................................................................................................20
1. Habitat protection

1.1 Designation of protected areas

1.1.1 Legislative measures

The breeding range of the Great Bustard in the Hanság region was designated as a protected area in 1973 by the provincial government of Burgenland. In 1993, the area Waasen – Hanság (approximately 142 ha) was added to the Lake Neusiedl National Park, primarily because of the occurrence of Great Bustards there. In Austria, there are six Important Bird Areas (IBA) in which Great Bustards occur (cf. Fig. 1): The Austrian part of Hansag (4,481 ha), the Parndorfer Platte (16,651 ha), the Heideboden (7,979 ha), the Feuchte Ebene-Rauchenwarther Platte (8,156 ha), the Western Weinviertel (31,613 ha, cf. Fig. 2) and the Central Marchfeld (34,536 ha). The areas in ha refer to the total size of the IBA, and are therefore larger than the Great Bustard ranges inside these areas. Between 1996 and 2003 the basis for suitable protected areas for Great Bustards has been created through the designation of Natura 2000 sites. For example, the Natura 2000 area Parndorfer Platte-Heideboden was designated by the provincial government of Burgenland in 2001, after a study about the delineation was carried out by WWF and BirdLife. Altogether, Austria protects almost all Great Bustard ranges (leks, breeding areas and key migration and wintering sites) through Natura 2000 (see Table 1). In both Burgenland and Lower Austria, more than 90 % of the breeding sites and leks are within SPAs or a National Park.

Figure 1: Distribution of the Great Bustard in Austria, schematically (Map: Kollar (2001): Aktionsplan: Schutz für die Großtrappe in Österreich, WWF Österreich).
Table 1: Austrian Important Bird Areas (IBAs) with populations of Great Bustards in 2003 and corresponding Protected Areas (PAs).

<table>
<thead>
<tr>
<th>Int. Name of IBA</th>
<th>Area of IBA ha</th>
<th>Name of Protected Area</th>
<th>Area of PA ha</th>
<th>Comments relating to the species’ situation within the Protected Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austrian part of Hansag</td>
<td>4,481</td>
<td>National Park Lake Neusiedl, Hansag section</td>
<td>140</td>
<td>most breeding sites and leks within National Park area</td>
</tr>
<tr>
<td>Parndorfer Platte</td>
<td>16,651</td>
<td>SPA Parndorfer Platte - Heideboden</td>
<td>7,169</td>
<td>all breeding sites and leks within SPA</td>
</tr>
<tr>
<td>Heideboden</td>
<td>7,979</td>
<td>SPA Feuchte Ebene - Leithaauen</td>
<td>7,169</td>
<td>most breeding sites and leks within SPA</td>
</tr>
<tr>
<td>Feuchte Ebene - Rauchenwarther Platte</td>
<td>8,156</td>
<td>SPA Feuchte Ebene - Leithaauen</td>
<td>3,772</td>
<td>breeding sites and leks not within SPA (population 2003: 1 male, 2 females)</td>
</tr>
<tr>
<td>Western Weinviertel</td>
<td>31,613</td>
<td>SPA Western Weinviertel</td>
<td>12,019</td>
<td>all breeding sites and leks within SPA</td>
</tr>
<tr>
<td>Central Marchfeld</td>
<td>34,536</td>
<td>SPA Sandboden und Praterterrasse</td>
<td>15,430</td>
<td>all breeding sites and leks within SPA</td>
</tr>
</tbody>
</table>

Figure 2: The current main ranges of the Great Bustard in the SPA Western Weinviertel are situated on rolling hills in an agricultural area that is largely free of hedgerows and trees.
1.1.2 Enforcement

In Austria, extensive measures are taken for the management of all breeding areas and key migration and wintering sites of the Great Bustard. In Austria, many institutions and organisations are playing an important role in promoting the implementation of Great Bustard species conservation: In particular, the two provincial governments of Burgenland and Lower Austria as well as the Federal Ministry of Agriculture, Forestry, Environment and Water management of Austria (BMLFUW), local councils, the NGOs like WWF Austria, BirdLife Austria, Naturschutzbund, Distelverein and others, but also the hunting associations and the farmers unions of Burgenland and Lower Austria. The majority of the conservation activities are co-financed by the EU.

In 2000, the WWF in the context of its campaign “Lass Sie leben” jointly with the BMLFUW raised the profile of Great Bustard species conservation efforts nationally and internationally through the signing of the Memorandum of Understanding on the Conservation and Management of the Middle-European Population of the Great Bustard (Otis tarda) (MoU) and the publication of the Action Plan for the protection of the Great Bustard in Austria. Since 2000, there has been a Great Bustard species protection project coordinator in Austria. This work is carried out by Rainer Raab. In addition, regular (but not daily) surveillance is carried out in all bustard ranges by a surveillance officer. In the Lake Neusiedl National Park this is Erich Patak of the National Park staff, and in all other bustard areas in Lower Austria and Burgenland it is Rainer Raab and his co-workers, financed through European community funding. In the province of Burgenland, this funding is provided under the INTERREG-III A – Programme for Austria and Hungary entitled “Species Protection Project for the Great Bustard in the areas Parndorfer Platte and Heideboden” (Project No. HUBP5M2_0015, running from 2002 to 2006). In the province of Lower Austria, the funding is provided under the Rural Development Programme “Species Protection Project for the Great Bustard in the areas Weinviertel, Marchfeld und Rauchenwarther Platte” (Project No. RU5-LE-152/000, running from 2002 to 2004). In addition, close cooperation with farmers, hunters and other local people is actively promoted by the project coordinator and surveillance officers to ensure good information exchange on all matters relevant to bustard conservation.

Lease or acquisition of land for bustard conservation is not feasible in Austria. Therefore, the maintenance of Great Bustard habitats both inside and outside the proposed Natura 2000 sites is carried out through measures under “ÖPUL”, the Austrian Agri-environment scheme (see below, point 1.2.1).

1.2 Measures taken to ensure the maintenance of Great Bustard habitats outside protected areas.

1.2.1 Maintenance of Great Bustard habitats

The maintenance of Great Bustard habitats both inside and outside the proposed Natura 2000 sites is carried out through measures under “ÖPUL”, the Austrian Agri-environment scheme. ÖPUL measures allow compensation to be given to farmers in return for carrying out specific conservation measures for a period of at least 5, 10 or 20 years. In the context of Great
Bustard conservation, there are currently three different ÖPUL measures in Lower Austria, the so called “WF”, “K” and “WS” measures, and there is one ÖPUL measure in Burgenland, the so called “WF” measure (see below for details). Specific adaptations of all these measures have been created for Great Bustard management in the different bustard ranges. The most significant success of the bustard conservation project in 2003 has been the implementation of measures for bustards on an area of approximately 3,600 ha in the bustard range of the “Western Weinviertel”, financed through the additional ÖPUL measure “WS”. These measures have been agreed with about 350 participating farmers, and will last for the period 2003 to 2007. In 2003 the total "ÖPUL bustard protection areas" in the whole of Austria amounted to more than 5,500 ha. "ÖPUL bustard protection grants" totalling around Euro 2,000,000 are paid to Austrian farmers every year. The successful introduction of these measures is largely due to the good cooperation between the provincial governments of Burgenland and Lower Austria, farmers, and the surveillance officers, which led to the development of regionally adapted ÖPUL measures (cf. Fig. 3 and 4).

Figure 3: Great Bustard habitat with areas under special measures in the Western Weinviertel.

Details of the ÖPUL (=agri-environment) measures in Lower Austria:
The ÖPUL “WF” measure for bustards could be called “bustard cereal”, because under this measure farmers grow cereals on a field for at least 3 out of 5 years, and during this period they are not allowed to apply any fertiliser or pesticides, or to irrigate or fence the fields. Furthermore, in order that bustards are provided with undisturbed breeding sites, farmers are not allowed to access these cereal fields at all between the 20th of April and harvest time in July. This measure is particularly beneficial for Great Bustards, because many females choose winter wheat as their breeding site.
The ÖPUL “K” measure for bustards could be called “bustard fallow land”. For a period of 5, 10 or 20 years, farmers are not allowed to apply any fertiliser or pesticides, or to irrigate or fence the fields, and they either allow natural vegetation to come up, or they plant various clover varieties, grasses or mustard. A small part of the area is re-seeded every year in order to provide more variety and fresh green growth for bustards. Fields are cut and mulched once a year between April and September, after a date has been agreed with the surveillance officer. Fallow land is important for bustards, because it provides cover and especially insects, which are vital for juvenile bustards during the first weeks of their lives.

Figure 4: Great Bustard habitat with areas under special measures in the Central Marchfeld.

The ÖPUL “WS” measure is the least expensive measure, and is subdivided into two subsidy levels. For the lower subsidy level, the only restrictions are that farmers are not allowed to increase field sizes, or to plant wind breakers, and if a bustard nest is found in a field, farmers cannot access an area of at least 50m around the nest. For the higher subsidy level, farmers cultivate either rape once in five years, or winter wheat at least twice in five years. All restrictions of the lower subsidy level apply, but in addition, farmers are not allowed to poison rodents, and if they grow wheat, they are not allowed to access fields at all between the 20th of April and harvest time in July. On the one hand the higher level subsidy improves the living conditions for bustards through the provision of undisturbed breeding sites in winter wheat, and on the other hand it improves food availability in the autumn and winter period, because rape is the bustards’ main food in this season.
Details of the ÖPUL (=agri-environment) measures in Burgenland:

There are two regional variants of the ÖPUL “WF” measure for bustards in Burgenland, which could be called “bustard fallow land” and “bustard meadow” respectively.

For the “bustard fallow land” (in the region Parndorfer Platte – Heideboden), farmers are not allowed to apply any fertiliser or pesticides, or to irrigate or fence the fields for a period of 5 years. They either allow natural vegetation to come up, or they plant various clover varieties or grasses. A small part of the area is re-seeded every year with various clover varieties, rape, or a mixture of mustard, buckwheat, sunflowers and peas in order to provide more variety and fresh green growth for bustards. A small part is also ploughed and left as bare ground every year. Most of the fields are cut and mulched once a year usually after 1st September, after a date has been agreed with the surveillance officer. Some of the fallow land is not mulched or ploughed at all, if the surveillance officer decides so.

In the area Waasen – Hanság in the Lake Neusiedl National Park the “bustard fallow land” is managed in the same way as in the region Parndorfer Platte – Heideboden except that there is no re-seeding and no ploughing every year. In addition, there is a “bustard meadow” measure. Under this measure, meadows are cut once a year from June onwards, after a date has been agreed with the surveillance officer, and a part of the area is grazed with cattle in agreement with the National Park office.

1.2.2 Promotion of set-aside schemes and extensification programmes

See above, point 1.2.1. The ÖPUL “K” and “WF” measures for bustards specifically promote the creation of what could be called “bustard fallow land”, and the other ÖPUL measures provide for a range of extensification schemes.

1.2.3 Preservation of traditional agricultural methods

See above, point 1.2.1. The ÖPUL measures provide for a range of extensification schemes, including some traditional agricultural methods such as non-intensive grazing.

1.2.4 Availability and quality of the habitat in the winter quarters

The wintering sites of the Great Bustard populations have been included in the Natura 2000 areas designated for Great Bustards. In Lower Austria, the higher subsidy level of the ÖPUL “WS” measure provides an incentive to farmers for cultivating rape once in five years, in order to improve the quality of the habitat (see above, 1.2.1). The ÖPUL “WF” measure also allows farmers to plant rape once in five years. Since this rape (unlike the “WS” rape) is neither fertilised nor treated with pesticides, farmers cannot harvest any valuable yields. In the province of Burgenland, the ÖPUL “WF” measure is used to promote cultivation of rape and alfalfa in various ways (see above, 1.2.1): On many of the fields left as fallow land a variety of clovers including alfalfa, as well as rape is initially planted, so that the fallow land later contains a percentage of alfalfa. On the fields re-seeded every year, a mixture of clovers is planted, and on the ploughed fields that are left as bare ground a mixture of rape and
mustard is planted in August. In addition, farmers are encouraged (without subsidies) to plant rape on suitable fields.

1.3 Measures taken to avoid fragmentation of Great Bustard habitats

1.3.1 Afforestation

In most of the bustard ranges, windbreakers cannot be planted by farmers between fields without permission of the provincial governments. In the area of approximately 3,600 ha in the bustard range of the “Western Weinviertel” planting windbreakers is completely ruled out through the ÖPUL "WS" measure for Great Bustards.

1.3.2 Other activities resulting in habitat fragmentation

Between 1996 and 2003 the basis for suitable protected areas for Great Bustards has been created through the designation of Natura 2000 sites. Great Bustards and their habitats are taken into consideration, for example in the planning of wind farms, roads and commercial or industrial sites. Despite this and the creation of Natura 2000 sites, further fragmentation and isolation of habitats, for example through power lines outside these sites is to be expected.

2. Prevention of hunting, disturbance and other threats

2.1 Hunting

Since 1969 hunting of Great Bustards has been banned in Austria. In all Great Bustard ranges hunters agree to take the species and its needs into consideration in agreement with the EU Bird Directive. In the breeding season most hunting activities are suspended voluntarily at the breeding sites. In general, hunting hides are only built or moved in agreement with the local surveillance officers. Nevertheless, seasonal hunting activities like Roe Deer hunting, particularly in May and July, and Brown Hare, pheasant and Grey Partridge hunting in the autumn can be a considerable disturbance.

2.2 Prevention of disturbance

The surveillance officers endeavour to keep disturbance of Great Bustards at a low level. The ÖPUL measures help to reduce agricultural activities in bustard areas, in particular during the breeding season (see 1.2.1). If parts of the fallow land are cut or mulched during the breeding season in order to provide fresh and low growth for the chicks, the surveillance officer accompanies the farmer in order to keep disturbances for the birds to a minimum or stop the work entirely if necessary. In bustard areas close to the border where soldiers usually patrol the border line, an agreement has been reached between provincial nature conservation bodies and the armed forces which ensures that for three months every year during the breeding season the breeding sites are not disturbed. In addition, there is a general agreement with farmers and hunters to keep all disturbances in bustard areas to a necessary minimum.
The surveillance officers in cooperation with hunters and farmers try to reduce disturbance through leisure activities such as dog walking, biking, nordic walking, jogging and horse riding. There are agreements with the armed forces to prevent unnecessary disturbances through aircraft and helicopters. There are efforts to implement similar agreements with the private aviation bodies.

### 2.3 Other threats to the Great Bustard

#### 2.3.1 Prevention of predation

Populations of foxes, Hooded Crows, enoks and wild boars are hunted within legal limits, but this is mostly not enough to control these populations. So they are still increasing and in the coming years higher negative impacts cannot be excluded.

Since Red Foxes are a serious threat to juvenile Great Bustards, a good cooperation between hunters and conservationists is very valuable in this regard. A deliberate reduction of rare species which can also be a threat to bustards, such as the Eastern Imperial Eagle and the White-tailed Eagle, is naturally not the aim of conservation activities.

#### 2.3.2 Adoption of measures for power lines

Figure 5: Great Bustards, in this case an adult male, can take to the air with powerful beats of their wings. While they are enduring fliers and can cover distances of more than 200 km in a day, their manoeuvrability is limited by their great weight and large wingspan.
Collisions of flying Great Bustards (Fig. 5) with power lines are currently among the most serious threats to the Great Bustard population in Austria. At the moment, only some power lines in bustard areas are marked or buried, and some of these are not marked sufficiently. In the period from the end of September 2002 to the end of September 2003 alone, 11 Great Bustards have been proven to have died through collision with power lines in Austria (8 in the area of the Western Weinviertel, and 3 in the area of Parndorfer Platte – Heideboden). Therefore, intensive contacts with energy companies have been established since 2003. In February 2004, 3 sections of a 110kV power line, and in May 2004, 5 sections of a 380kV power line in the bustard area of the “Western Weinviertel” have been marked in different ways to assess suitability for preventing Great Bustard collisions. Altogether, however, power lines remain a major problem, and despite the high costs of burying or marking them much more needs to be done. Due to the current economic constraints of energy companies, outside funding will probably need to be made available. For this reason, plans are being made for the period Juli 2005 to June 2010 to mark approximately 125 km of 110, 220 and 380 kV power lines, and to bury more than 40 km of 20 kV power lines in the bustard ranges in Burgenland and Lower Austria through an EU LIFE NATURE project.

2.3.3 Compensatory measures

In Austria, there is currently no need for compensatory measures, as any activities which will create new loss or degradation of Great Bustard habitat or longer term disturbance of the species are kept at bay. However, if degradation should occur in future, it should be compensated by appropriate measures.

3. Possession and trade

The Great Bustard is a strictly protected species in Lower Austria and Burgenland. In both provinces, the Great Bustard is counted as game under the provincial hunting laws and is therefore not subject to nature conservation law. However, there is no hunting season, i.e. there is an all-year ban on hunting. Furthermore, the collection of eggs or chicks, the possession of and trade in the birds and their eggs is strictly prohibited and the restrictions are controlled. Authorization are only granted out of nature conservation interests. In Austria, no specimen is in private or other possession such as zoos.

4. Recovery measures

4.1 Captive breeding in emergency situations

If injured or seriously ill Great Bustards are found, they are taken into captivity and cared for until they have recovered and are then released again as soon as possible. Captive breeding of bustards is only carried out in exceptional circumstances, when a nest has been abandoned, with only four eggs incubated between 2001 and 2004 in the years 2002 and 2004. There is no specific station for Great Bustards in Austria. Injured or seriously ill Great Bustards are taken to the "Eulen- und Greifvogelstation" (owl and bird of prey station) Haringsee. Bustards receive excellent veterinary care from Professor Frey, but the housing among birds of prey is not ideal. For this reason, the two Great Bustard chicks hatched in captivity in 2004
were taken to Hungary on 27\textsuperscript{th} May 2004 for transfer to the Great Bustard Rescue Station at Dévaványa.

**4.2 Reintroduction**

Releasing captive bred bustards into the wild was carried out only in one instance in the year 2002, when two young Great Bustards hatched from eggs found in an abandoned nest were released (Fig. 6).

![Figure 6: The two Great Bustards chicks hatched from eggs found in an abandoned nest in 2002.](image)

**4.3 Monitoring of the success of release programs**

The one instance of releasing captive bred bustards in the year 2002 was intensively monitored. Of the two young males released (Fig. 7), one died by predation on 13\textsuperscript{th} September 2002, more than two months after its release. The other young male is still alive in 2004, and is moving around the Great Bustard ranges of the Marchfeld, where it was released.
Figure 7: The two young Great Bustards hatched from eggs found in an abandoned nest after their release into the wild in 2002.

### 5. Cross-border conservation measures

An annual coordinated census of Great Bustards is carried out in cooperation with Hungary, Slovakia and the Czech Republic. Good contacts exist with ornithologists working on Great Bustards in these countries, and joint meetings and research field trips are organised regularly. Since the start of the INTERREG Project, the cross-border Great Bustard conservation programme for the common population around the Austrian-Hungarian-Slovakian border, cooperation with experts in these countries has been intensified. In the coming years, cross-border conservation measures will be extended further in this region, but also around the Austrian-Czech border. After Hungary already started an EU LIFE project, there are ongoing plans that Austria, the Czech Republic and Slovakia will hand in three mutually agreed LIFE projects in the autumn of 2004.

Austria will host a scientific symposium and the first meeting of the signatories of the MoU on 14-18 September 2004. This meeting is organised and supported by the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals UNEP/CMS in Bonn, the Federal Ministry of Agriculture, Forestry, Environment and Water management of
Austria (BMLFUW), and in collaboration with the Government of Hungary. The agenda for the scientific symposium was compiled by Rainer Raab for the BMLFUW.

6. Monitoring and research

6.1 Monitoring of population parameters and of the effects of management measures

6.1.1 Monitoring of population size and population trends

Monitoring of population size and trends is carried out regularly at all sites. Good contacts exist with many local farmers and hunters and other interested persons, which is an important contribution to monitoring populations. Census methods have been standardised.

While in 1940 there was a total of approximately 700-800 Great Bustards in Austria, the population fell to only about 61 individuals in 1995. In recent years, the population increased again slightly (Table 2, Fig. 8).

Table 2: Development of Great Bustard subpopulations (Individuals) in Austria (Source: Kollar (2001): Aktionsplan: Schutz für die Großtrappe in Österreich, WWF Österreich, amended).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Weinviertel</td>
<td>387</td>
<td>23-27</td>
<td>20-27</td>
<td>15-20</td>
<td>22*</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Central Marchfeld</td>
<td>55</td>
<td>47</td>
<td>25</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Wiener Becken</td>
<td>&gt; 100</td>
<td>15-25</td>
<td>2-3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rauchenwarther Platte</td>
<td>ca. 20</td>
<td>7-8</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Austrian part of Heideboden</td>
<td>300 bis 400</td>
<td>ca. 20 ?</td>
<td>3-4 ?</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>34-67</td>
</tr>
<tr>
<td>Parndorfer Platte</td>
<td>20-30</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Austrian part of Hansag</td>
<td>40-50</td>
<td>ca. 40</td>
<td>16</td>
<td>18</td>
<td>14</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>700-800</td>
<td>150-170</td>
<td>ca. 130</td>
<td>68-73</td>
<td>ca. 61</td>
<td>74</td>
<td>107-140</td>
</tr>
</tbody>
</table>

It is difficult to give exact numbers of the breeding population in Austria (see Table 3), because the Austrian population is only a part of the transboundary population of parts of Hungary, Austria, Slovakia and the Czech Republic. In recent years increasingly more individuals breed in Austria, but not all of these additional birds were born in Austria. Therefore, the population increase in Austria is higher than in the whole transboundary population. The total transboundary population numbered approximately 251 (to 255?) individuals in winter 2003/2004. In winter, most of this transboundary population currently stays in Austria, and in spring the population disperses into their breeding areas.
Figure 8: Population of the Great Bustard in Austria in selected years between 1940 and 2004.

Table 3: Minimum and maximum populations of Great Bustards in Austrian Important Bird Areas (IBAs) in 2003. Data supplied by Erich Patak (Austrian part of Hansag) and Rainer Raab (all other IBAs).

<table>
<thead>
<tr>
<th>Int. Name of IBA</th>
<th>Min. Pop. in IBA in 2003</th>
<th>Max. Pop. in IBA in 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austrian part of Hansag</td>
<td>16 (12m 4f)</td>
<td>21 (12m 4f 5j)</td>
</tr>
<tr>
<td>Parndorfer Platte</td>
<td>6 (6f)</td>
<td>13 (6f 7j)</td>
</tr>
<tr>
<td>Austrian part of Heideboden</td>
<td>ca. 34-67 (16-37m 18-30f)</td>
<td>ca. 62-97 (16-37m 18-30f 20-30j)</td>
</tr>
<tr>
<td>Feuchte Ebene - Rauchenwarther Platte</td>
<td>3 (1m 2f)</td>
<td>3 (1m 2f)</td>
</tr>
<tr>
<td>Western Weinviertel</td>
<td>40 (19m 21f)</td>
<td>50 (19m 21f 10j)</td>
</tr>
<tr>
<td>Central Marchfeld</td>
<td>8 (3m 5f)</td>
<td>11 (3m 5f 3j)</td>
</tr>
<tr>
<td>Total in Austria</td>
<td>ca. 107-140 (51-72m 56-68f)</td>
<td>ca. 162-205 (51-72m 56-68f 55-65j)</td>
</tr>
</tbody>
</table>

In order to be able to come to scientifically well-grounded conclusions about the total population size of the west-pannonic transboundary population, it is essential that apart from the regular counts of all subpopulations in the four countries Austria, Hungary, Slovakia and the Czech Republic, several synchronised censuses are carried out every year by experts from these countries. In addition, it would be extremely helpful if all the data about population sizes, land use and habitat management from different sides would be combined in one data
base, transferred to and analysed with GIS, and shared among all four countries. While first steps in this direction have been taken under the current INTERREG project, an efficient implementation of this task as a basis for improved and scientifically well-grounded habitat management and conservation measures in the future will probably require further outside funding. Therefore, this task is an important aim under the EU LIFE project which is currently being planned in Austria.

6.1.2 Monitoring of the effects of habitat management

Monitoring of effects of habitat management is carried out regularly at all sites.

**6.2 Promotion of research which is of direct application to the conservation of the Great Bustard**

6.2.1 Comparative ecological studies

Comparative studies on the different sub-populations in Austria are carried out.

6.2.2 Promotion of studies on mortality factors

Mortality factors are studied whenever possible, for example targeted searches are carried out when individual birds go missing. This has been important for example in identifying collisions with power lines as an important mortality factor.

6.2.3 Investigation of factors limiting breeding success

Intensive studies on breeding success have been carried out, but certain conclusions about the reasons for failure are difficult to reach.

6.2.4 Studies on migration

Since currently no satellite telemetry is carried out, migration patterns are understood only incompletely. Nevertheless, observations of flying bustards are carefully recorded.

**7. Training of staff working in conservation bodies**

The project coordinator carries out frequent personal meetings and field trips to Great Bustard areas with staff from conservation bodies.
8. Increasing awareness of the need to protect Great Bustards and their habitat

8.1 The Great Bustard as a flagship

The Great Bustard has become established as an important flagship species for agricultural landscape conservation in recent years.

Figure 9: In Austria the Great Bustard is an important flagship species for agricultural landscape conservation.

8.2 Increasing the awareness of farmers and shepherds

Several information events for farmers and landowners have been carried out in cooperation with the farmers' chamber, and hundreds of hours of personal talks with farmers. This has led to important successes, such as nearly 100% of farmers in the bustard range of Western Weinviertel participating in the “ÖPUL” Great Bustard measures.
8.3 Improving public awareness

Occasional TV, radio, newspaper and interest group (farmers, hunters, etc.) magazine coverage of Great Bustard issues has been promoted by the project coordinator and the Lake Neusiedl National Park, but so far without making habitat locations outside the National Park public. Several photo exhibitions about Great Bustard conservation have been organised by the project coordinator in cooperation with the wildlife photographers Franz Kovacs and Josef Timar in Vienna and Budapest and in different cities and towns of Lower Austria and Burgenland. A dedicated internet site exists since 2001: www.grosstrappe.at. In order to raise acceptance of the large-scale protected areas for Great Bustards in Austria, and of Natura 2000 sites in general, a lot of effort will go into raising public awareness on these issues in the coming years. Implementation of the planned LIFE project would ensure significant progress in this respect (see points 2.3.2, as well as 5 and 6.1.1).

9. Economic measures

In Austria, state authorities, political decision makers and associations of land users (e.g. farmers, hunters) cooperate with the aim of developing economic activities which are not harmful to Great Bustards and the biodiversity on which they depend. For example, the executive committee of the organisation “Interest Group European Protected Area Parndorfer Platte – Heideboden” consists of representatives of regional politicians, farmers, hunters and non-governmental nature conservation bodies. This society handed in the Great Bustard INTERREG project in Burgenland, and aims to promote the implementation of conservation measures in a spirit of partnership among all its members. Therefore, increasing acceptance of Great Bustard conservation measures by local communities and compensating for any damage land users may experience as a result of such conservation measures are important aims of the society. To achieve these goals on a continued basis, the livelihood and economic viability of the local populations must be safeguarded, and the society works on this as one of its priorities, for example through the promotion of specific ÖPUL measures. In the Western Weinviertel in Lower Austria, the organisation “Green World” also brings together local politicians, land users and conservationists, and successfully promotes aims similar to the ones of “Interest Group European Protected Area Parndorfer Platte – Heideboden”.

10. Threats

Currently the main threats to the Great Bustard in Austria are as follows:

- Collisions with power lines (for immature and adult Great Bustards)
- Predation by Red Fox and other carnivorous mammals, corvids, and birds of prey (for juvenile and immature Great Bustards)
- High intensity of agricultural use (application of pesticides and fertilisers, irrigation, ever wider and faster machinery for harvesting, higher levels of disturbance through manual work in vegetable fields, increasing field sizes).
- Disturbance through increasing leisure activities, seasonal hunting activities, etc.
• Severe winters with a lot of snow, leading to migration with associated risks like collisions with power lines
• Extreme or adverse weather conditions during the breeding period (strong downpours of rain, hail, cold periods during the hatching period).
• Habitat fragmentation and / or deterioration through infrastructure development (power lines, wind farms, roads, airports, development of shopping centres etc. and housing), as well as afforestation and ongoing intensification of agriculture in parts of and outside protected areas
• Decreasing incentives for winter rape for conventional agriculture

11. Achievement of country-specific aims for Austria

Endeavour to extend the ongoing set-aside and habitat management schemes.

Since the Memorandum of Understanding was signed by Austria in 2001, the ongoing set-aside and habitat management schemes have been extended significantly (see above, 1.2.1 and 1.2.2).

Ensure the control of all populations locally and the care for breeding females in the field.

Regular surveillance is carried out in all bustard ranges by a surveillance officer. In the Lake Neusiedl National Park this is Erich Patak and in all other bustard areas in Lower Austria and Burgenland it is Rainer Raab and his co-workers (see above, 1.1.2)

Improve and strengthen cross-border co-operation with neighbouring countries by reviewing and coordinating existing and/or developing new programmes for the research, monitoring and protection of Great Bustards.

Since the start of the INTERREG Project in the year 2002, the cross-border cooperation with neighbouring countries, especially with experts from Hungary and Slovakia has been intensified. In the coming years, cross-border cooperation will be extended further with these countries, and also with the Czech Republic. After Hungary already started an EU LIFE project, there are ongoing plans that Austria, the Czech Republic and Slovakia will hand in three mutually agreed LIFE projects in the autumn of 2004 in order to further the research, monitoring and protection of Great Bustards. On 14-18 September 2004 Austria will host a scientific symposium and the first meeting of the signatories of the MoU (see above, 5).

12. Bibliography