

XXXIII. THE "NIEDERRHEIN" (LOWER RHINE) AREA (NORTH RHINE WESTPHALIA, FEDERAL REPUBLIC OF GERMANY), A GOOSE WINTERING AREA OF INCREASING IMPORTANCE IN THE DUTCH-GERMAN BORDER REGION

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Introduction

For many years the German "Niederrhein" (Lower Rhine) has been visited every winter for a shorter or longer period by wild geese (*Hartert*, 1887, *Le Roi*, 1906 and *Le Roi & Geyr von Schweppenburg*, 1912). Although reliable numbers are not known, it is certain there were only a few compared with today's numbers.

Description of the area

The wintering area for geese is situated on both sides of the River Rhine, between the Dutch town of Nijmegen and the capital of the Federal Republic of Germany, Bonn. The main part, where more than 99% of the geese winter, lies between Nijmegen and the German industrial city of Duisburg, along some 90 km of the Rhine, mainly of German territory in the federal state of North Rhine Westphalia (Fig. 1).

The goose feeding places are in the immediate neighbourhood of the Rhine, partly on the regularly flooded, grassy banks of the river ($\pm 15\%$), partly beyond the highwater dikes. They feed mainly ($\pm 86\%$) on grass fields (Fig. 2), and sleep on the banks of the Rhine and its old branches (Fig. 1).

In this traditionally agricultural region great changes have been going on in the last few years. An increasing part of the pastures in this formerly wet, grassy area have been converted into fields for winter grain, sugar-beet and maize, or into industrial areas, deep lakes and recreation areas. At the same time the number of wintering geese has constantly been growing.

Goose species

In the lower Rhine area the majority of the geese ($\pm 78\%$) are *Anser fabalis* (mainly of the subspecies *A. f. rossicus*), followed in number by *Anser albifrons albifrons*. Every winter small numbers of *Anser anser*, *Branta leucopsis* and *Branta canadensis* are found in the feeding flocks.

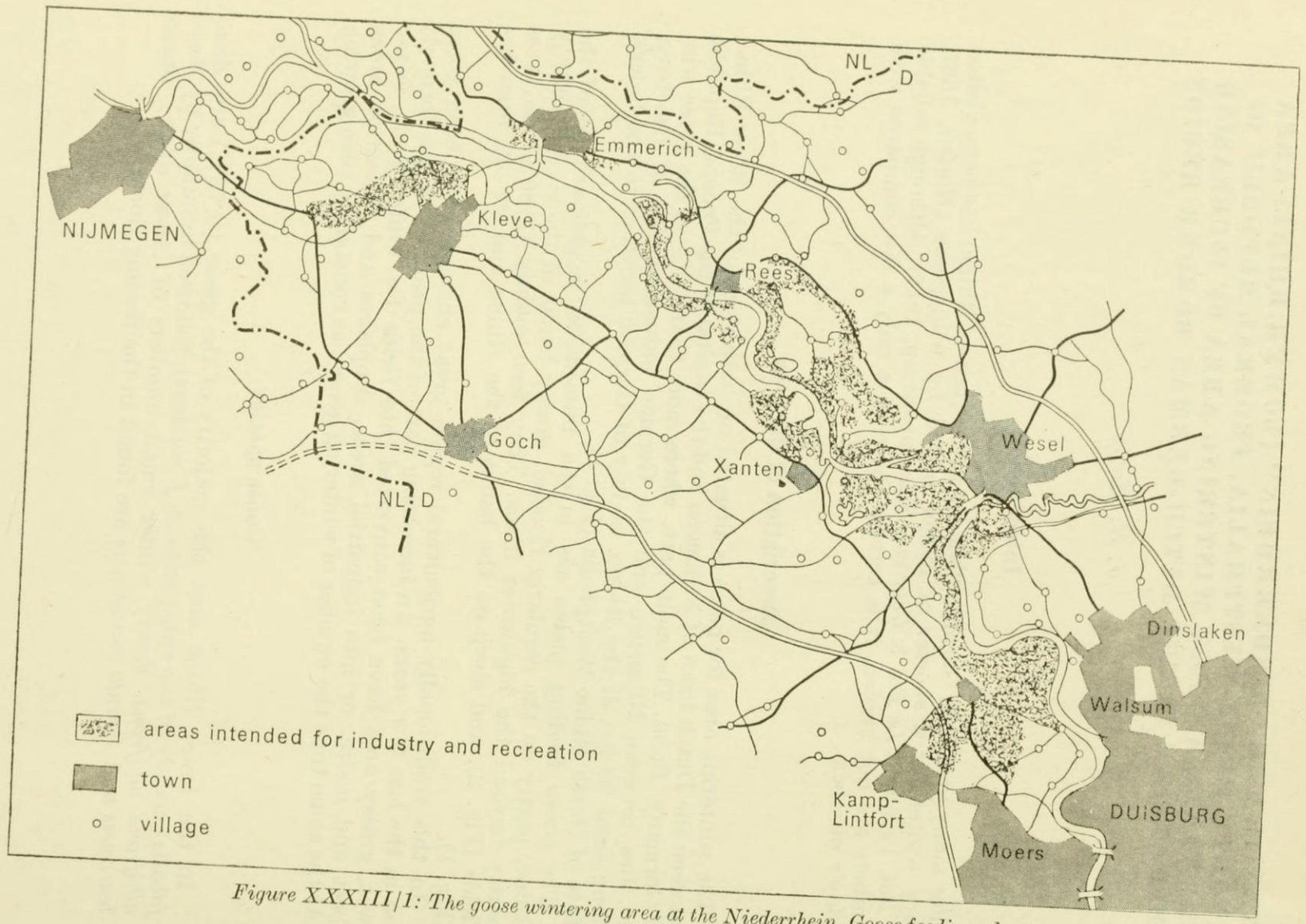


Figure XXXIII/1: The goose wintering area at the Niederrhein. Goose feeding places

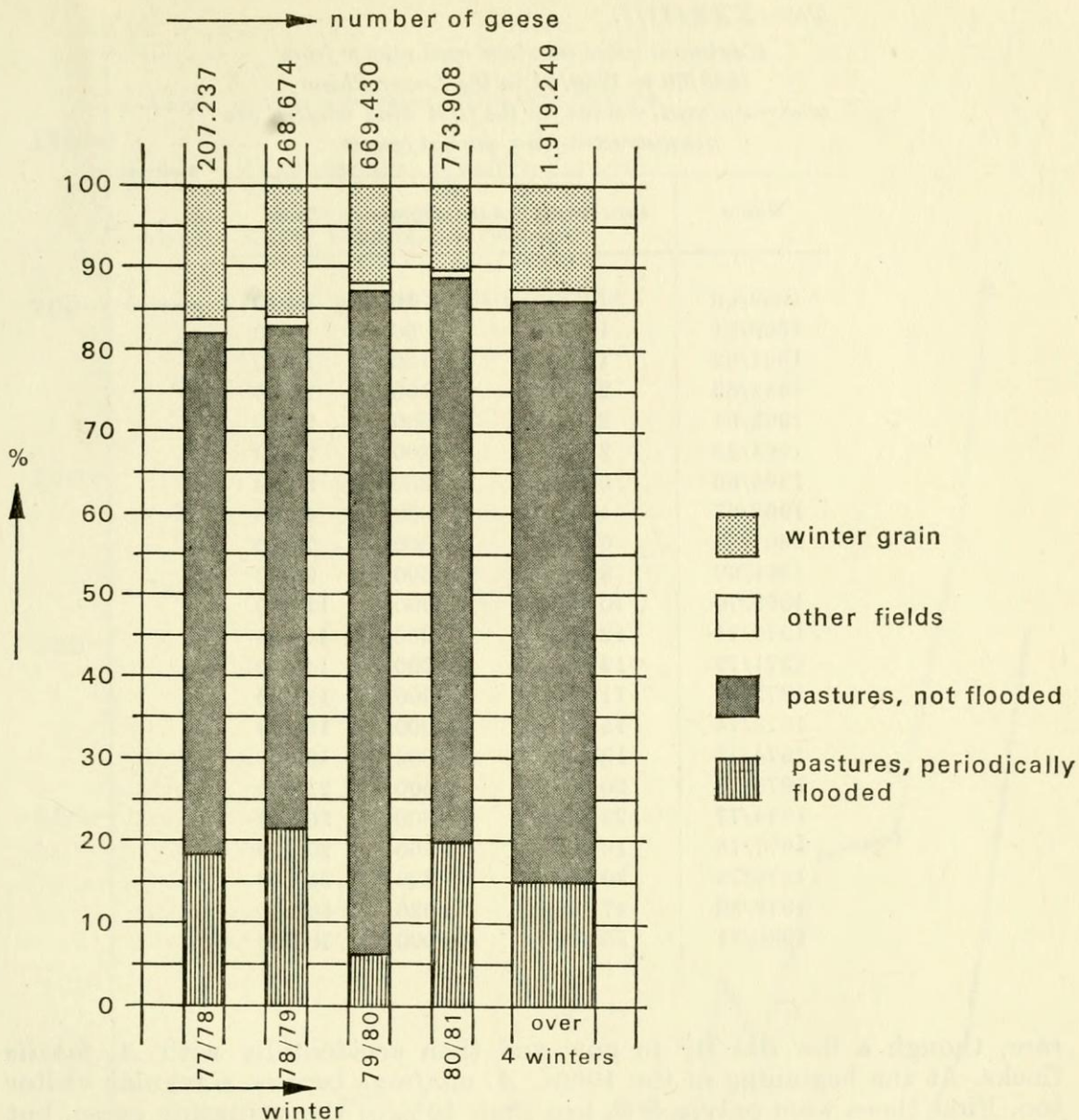


Figure XXXIII/2: The choice of fields by the geese at the Niederrhein, calculated as a percentage of the total number of geese observed in four winters (170 Observation days)

Goose numbers

Until the beginning of the sixties there were no data about the number of geese wintering in the Lower Rhine. Only from the publications mentioned above and the memories of farmers and hunters, is it known that geese did winter here a long time before the first incomplete counts were made.

As far as can be reconstructed (Mooij, 1979b), till the end of the 1950s only *A. fabalis* visited the Lower Rhine periodically in any numbers (1000 – 1500 at that time), and for any length of time (Table 1) *A. albifrons* was

Table XXXIII/1.

Maximum goose numbers each winter from
1959/60 to 1980/81 in the Lower Rhine
wintering area. Counts for the first nine winters are
reconstructed from partial counts

Winter	<i>Anser fabalis</i>	<i>Anser albifrons</i>	Total
1959/60	1 000	10	1 010
1960/61	1 500	50	1 550
1961/62	1 500	150	1 650
1962/63	2 000	100	2 100
1963/64	2 340	200	2 540
1964/65	2 770	200	2 970
1965/66	3 400	250	3 650
1966/67	4 100	600	4 700
1967/68	6 610	1 000	7 610
1968/69	8 090	1 500	9 590
1969/70	10 720	1 600	12 320
1970/71	12 450	2 350	14 800
1971/72	12 480	2 200	14 680
1972/73	11 490	1 900	13 390
1973/74	15 200	3 000	18 200
1974/75	13 600	3 000	16 600
1975/76	20 500	2 500	23 000
1976/77	23 500	2 800	26 300
1977/78	16 900	3 160	20 060
1978/79	20 590	5 520	26 110
1979/80	47 160	9 020	56 180
1980/81	55 000	15 000	70 000

rare, though a few did fly in now and then accidentally with *A. fabalis* flocks. At the beginning of the 1960s. *A. albifrons* became a regular visitor too. First there were only a few, less than 10% of the wintering geese, but the proportion slowly increased.

About twenty years later, in the winter of 1980/81, some 70 000 wintering geese were counted on the Lower Rhine. 15 000 (more than 20%) were *A. albifrons*, the remaining 55 000 *A. fabalis*.

With an increase of more than 4000% between the winters of 1959/1960 and 1979/1980 the increase of the *A. fabalis* population on the Lower Rhine is in harmony with that of the west European population. Over the same period the west European population of *A. albifrons* grew by 450%, while the Lower Rhine population grew by more than 90 000% (Fig. 3).

In the last few winters more than 20% of *A. fabalis* wintering in western Europe and about 2% of the west European population of *A. albifrons* have wintered on the Lower Rhine. All these figures show that, although little known, the Lower Rhine area is among the most important wintering

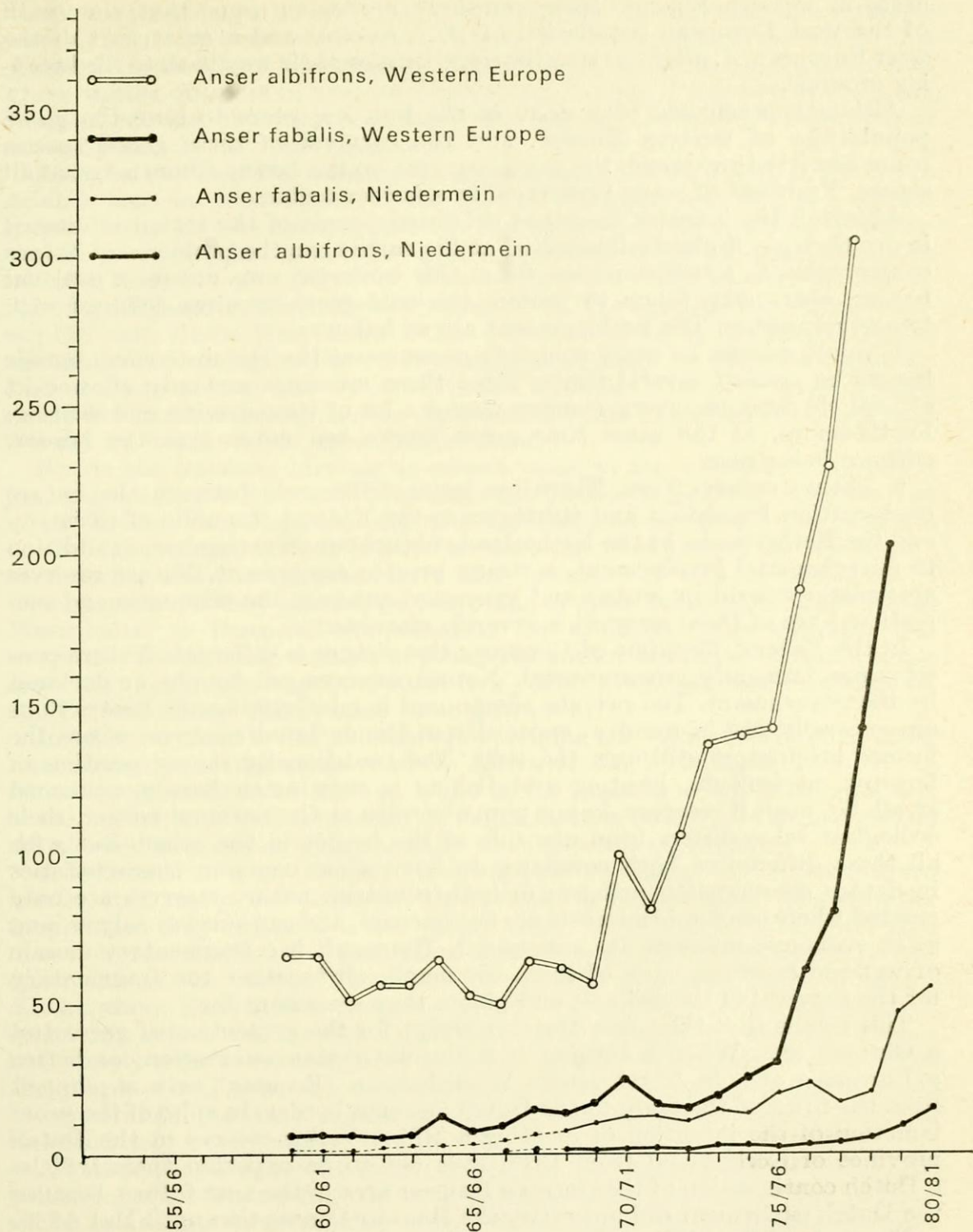


Figure XXXIII/3: Wintermaxima of Bean Geese (*A. fabalis*) and Whitefronted Geese (*A. albifrons*) in Western Europe (after Ganzenwerkgroup 1976, 1977, 1978, 1979, 1980, Philippona 1972 and Timmerman 1976) and at the Niederrhein (after Mooij 1979/b) in the period from 1959 till 1981.

areas in western Europe. Moreover there are strong signs that almost all of the west European population of *A. f. rossicus* and a great part of the west European *A. albifrons* stay for some time on their way back to the breeding grounds.

Although much has been done in the last few years to save the goose populations of western Europe, and the survival of these goose species is not directly threatened, the wintering area on the Lower Rhine is not at all secure. Problems of goose protection in a border region.

Although the increase described delighted people of the region interested in ornithology, it clearly illustrated at the same time the problems of nature conservation in a border region. Since this wintering area crosses a national border, every step taken to protect the wild geese requires dealings with two governments. The problems met are as follows:

1. Goose counts. In every complete goose count the Dutch-German border has to be crossed several times. Since these crossings are only allowed at official checkpoints, every counter wastes a lot of time driving and waiting. Furthermore, at the same time goose flocks can move over the border, without being seen.

2. Nature conservation. There are great differences between the nature conservation legislation and strategies in the Federal Republic of Germany and the Netherlands. In the Netherlands nature conservation has, in addition to governmental involvement, a strong private component. Nature reserves are mostly bought or rented and generally speaking the economic and recreational use of these reserves is severely restricted.

In the Federal Republic of Germany the picture is different. Nature conservation is mainly governmental. Nature reserves are bought or declared by the government. The private component is relatively small. Restrictions are generally few in number, especially in the declared reserves, where the former proprietors still own the land. The traditionally strong position of forestry, agriculture, hunting and fishing is very often hardly weakened at all. So, even if reserves do not stop abruptly at the national border, their ecological value differs from one side of the border to the other. But with all these differences both countries do have some common characteristics in nature conservation policies: in both countries nature reserves are only created where economic interests are not harmed, and can survive only as long as no economic interests are announced. The result is a fragmentary mosaic of wetland reserves, each of them too small, all together too fragmentary for the survival of the animals and plants they are meant for.

This means that there is a Dutch concept for the protection of geese and a German one. What is lacking is a Dutch-German conception, or better a European one. In North Rhine Westphalia a "Ramsar" area is planned from the town of Duisburg to the Dutch-German border. In spite of the proclamation of the intention of creating a Rhine Valley reserve in the Dutch province of Gelderland from 1977, it is not to be expected there will be a Dutch continuation of the German Ramsar area in the near future, because the Dutch parliament did not ratify the Ramsar Convention until May 1980.

The Federal Republic of Germany ratified the Ramsar Convention in 1976. However, although the international importance of the area was underlined in several publications (*Haarmann*, 1977, *Mooij*, 1979b) and even in an official research paper of the federal government (*Nake-Mann & Nake*, 1979), the

state government of North Rhine Westphalia gives economic interests absolute priority over nature conservation. The wetland reserves within this planned North Rhine Westphalian Ramsar area, one of the most important goose winter quarters in western Europe, are too small. Important areas are left out because of strong economic interests and the use of the protected areas by man hardly restricted at all.

3. Goose hunting. The hunting situation is rather complicated. In the Netherlands and in most states of the Federal Republic of Germany several goose species may be hunted, whereas in the state of North Rhine Westphalia, all goose species have been totally protected since the hunting season of 1974/75. It is a pity, however, that nothing is done to prevent the shooting of small game on the fields where geese feed. The result of the ban on hunting in North Rhine Westphalia is that geese wintering in the border region, though still roosting in the Netherlands, feed more on German territory. This leads to actions like those of Dutch hunters, who scare geese feeding in the German border region over the frontier, where their hunting colleagues, warned by walkie-talkie, try to shoot them.

Beside the constant increase in recent years in the number of wintering geese in the Lower Rhine, it is the different hunting regulation on either side of the border, that displeases German farmers and hunters living near the border. They argue that it is not fair that the Dutch have the "pleasure" of shooting and the Germans have the "trouble" of tens of thousands of feeding geese. So they asked for a reopening of goose hunting in North Rhine Westphalia, or financial compensation for so-called goose damage. But in spite of the growing number of geese, the author has failed to find a single real case of goose damage in the last five years of research, and furthermore, the farmers shared this opinion (*Mooij*, in prep).

In addition there is the problem of explaining the logic of forbidding goose hunting and creating goose reserves North Rhine Westphalia, to save the wintering geese from extinction, while at the same time, on the Dutch side of the border, a short distance away, Dutch hunters (and their German guests) are allowed to shoot as many as they want (see *Mooij*, 1979b).

4. Information gap. Despite international contacts, an intereuropean border still really can separate the people on either side. Transfrontier cooperation only exists in a few cases. When the effect of a regional plan does not cross the frontier, such plans in most cases are hardly known on the other side of the border. The same involuntary ignorance exists in nature conservation. Each side is planning, protecting, saving and making research on its own side of the frontier. Official bilateral contacts are too few in number, mostly refer to transregional problems and the few results seldom affect the people working in the region. Regional border-crossing contacts could be very fruitful, but are almost always of a private character and are therefore unfortunately ineffectual.

All these problems render goose protection and goose research more difficult in a border region. And all these problems will grow every year, because of the increasing concentration of the Lower Rhine geese in the immediate neighbourhood of the frontier, in the "Bijland-Komplex" (Fig. 4); "Komplex" is used to mean the unit made up by a roost and the feeding places visited by the geese in that roost. (See *Mooij*, 1979b.)

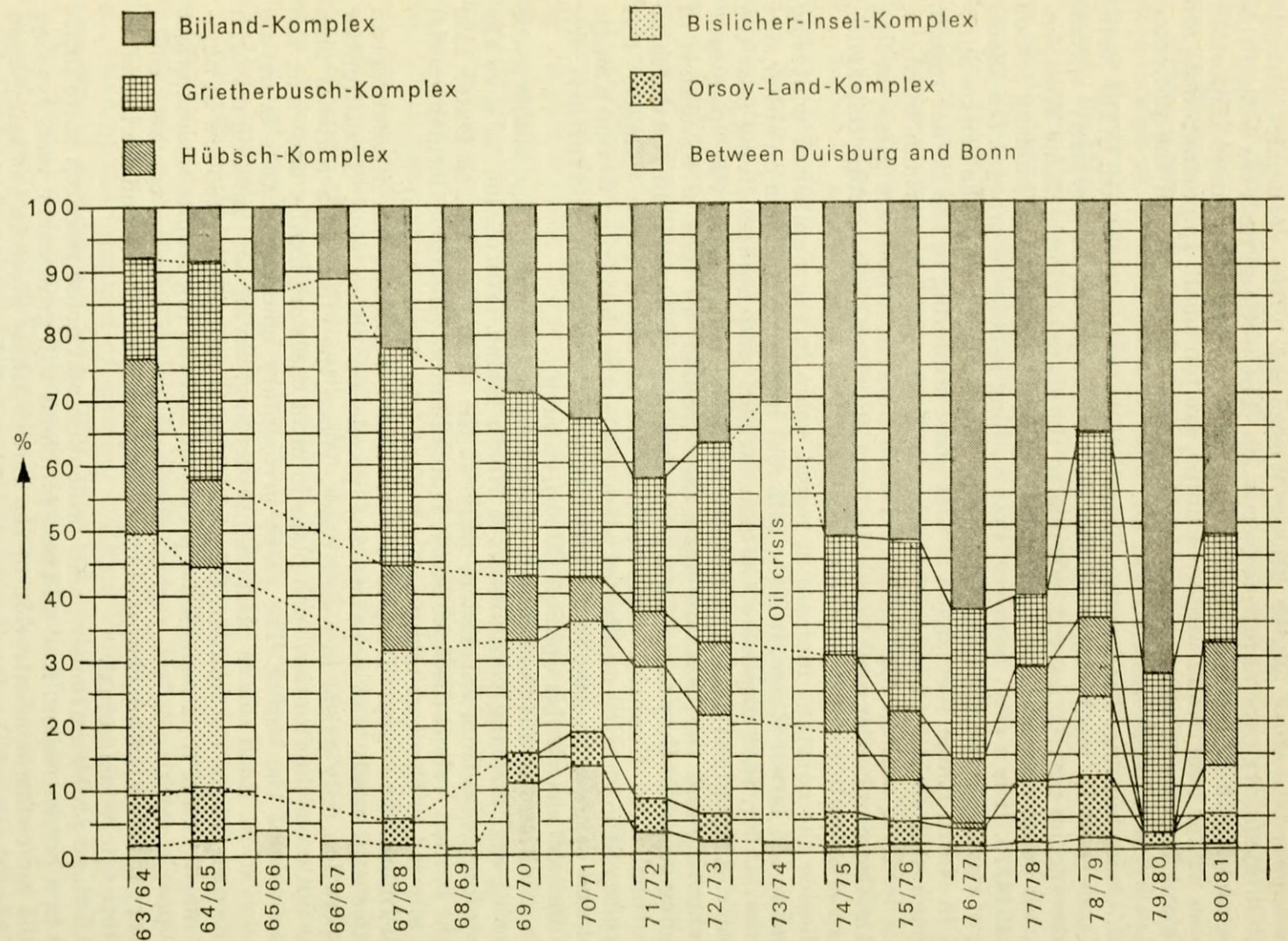


Figure XXXIII/4: Distribution of geese over the "Niederrhein" area at the time of wintermaximum, calculated in a percentage of the total number at that time, in the period from 1959 till 1981.

Problems of goose protection in an industrially oriented country

How politicians think about the Lower Rhine is becoming very clear, when they talk about the "Lower Rhine coastal industry location" as the perfect expansion area for heavy industry. When all the plans for the area have been realized in a few years, the following situation will exist (see Fig. 5 and 6).

1. There will be no more worries about nature in the 22 kilometres of the Rhine from Duisburg to Wessel. On both sides of the Rhine there will be expansion of the Ruhr-Gebiet, with in between, surrounded by industry and power plants, a wetland of 450 ha, called Walsumer Rheinaue. More than 1200 hectares of beautiful wetland, wintering place for up to 5000 geese (among other species), called Orsoy-Land/Orsoyer Rhein-bogen, will be sacrificed to industry (see Mooij, 1979b for "Orsoy Land Komplex").

2. In the next 25 km of the Rhine, from Wesel to Rees there will be great changes. The Lower Rhine is the most important gravel supplier in North Rhine Westphalia and gravel is found under the banks of the Rhine. So the gravel industry is digging up the river banks between Wesel and Rees, leaving behind some flat pastures without relief and a lot of water, divided into many big deep lakes. Most of these sheets of water are used for recreation.

At the moment there is one nature reserve of 117 ha in this area. It is planned that up to 1000 ha of partly refilled gravel pits will be added, so that in maybe twenty years a nature reserve of some 1200 ha will exist. Therefore nature has to do without some 1500 ha, that have been changed into lakes up to 15 m deep, with intensive and noisy recreation. Of more than 3000 ha of wetland, potential and actual feeding places for up to 20 000 geese (among other species), only half will remain. And this half will be ecologically devalued by lack of relief and hedges, both characteristic of the goose roosts and feeding places in the Lower Rhine wintering area. The Bislicher-Insel-Komplex and the Hübsch-Komplex will lose a lot of their attraction for geese.

3. In the following 15 km, from Rees to Emmerich (the "Grietherbusch-Komplex"), coming changes will not be so great. Of about 1900 ha of goose feeding area, only up to 300 ha have (so far!) been reserved for gravel digging, so that about 1600 ha will remain, among which 431 ha have the status of nature reserve.

The greatest threat to the up to 15 000 geese (mainly *A. albifrons*) wintering here in the last few years comes from agriculture. To provide food for the excessive animal stocks of the farms, which nowadays are almost factories, more and more pastures are changed into arable fields, especially maize fields, which means that geese are more and more deprived of their feeding base. Even in nature reserves this development occurs.

4. The last 10 km of the Rhine in Germany, from Emmerich to the Dutch village of Milligen aan de Rijn, are bordered by nature and goose reserves, with a total area of 4813 ha. It would seem that there is here a perfect example of how to carry on nature conservation, a Shangrila for up to 30 000 geese. But sadly, this is a somewhat premature assumption. All areas and regulations, which are important for nature conservation but which could give rise to conflicts with economic interests, are left out in advance. So in-

stead of a big, ecologically efficient, continuous goose reserve, this refuge has become a mosaic of protected and non-protected areas. Moreover, the ecological value of the protected areas is constantly reduced, for instance by the building of a federal highway (the so-called "new B 9") just outside the protected zones, and by the almost complete absence of regulations to reduce human activities in the reserves themselves. So more pastures are changed into fields for winter grain, sugar beet and maize every year. Although from an agricultural point of view the process has been proved totally inefficient, a lot of pastures are sprayed with liquid manure every winter and thus provide no food for geese, and some hedges are spirited away every year.

Goose prospects in the Lower Rhine wintering area

The overall picture in the coming years in the approximately 15 000 ha of potential and actual feeding places for an increasing wintering population of geese (about 70 000 in winter 1980/81) situated on the banks of about 90 km of the Rhine between Duisburg and the Dutch – German border, may be as follows:

1. 3000 ha (20% of the total area), mainly in the southern part of the region, will be lost to industry and recreation, without any legally prescribed compensation; and

2. 6900 ha (about 46%), mainly in the northern part of the wintering area will be under the negligible protection of "nature reserve" status, with only a few restrictions for users, although the law (Bundesnaturschutzgesetz Articles 10, 12 and 13) gives the state governments powers to make conditions for the exploitation of nature reserves.

This development will cause a concentration of wintering geese in the northern part of the wintering area, i. e. in the border region.

Because of the specific problems of goose protection and of nature conservation in frontier regions generally, the only way to promote effective nature conservation, and thereby to make protection for geese really effective, is at international level. Although there are many good intentions and many international conventions have been made with a number of small results, the fact is that international cooperation is still more talk than action. As the German biologist *Erz* (1980) wrote: "What is absent, is the action: the realization of existing legislation. The insufficient execution of legislation is the unsolved problem of nature conservation". (Translation *J. H. Mooij*.)

In the author's opinion it is the duty and mission of international organizations such as IWRB and WWF, not only to promote research, but to put pressure on governments to take nature conservation as seriously as economy. Because if we do not induce action now, we will, in a few years' time, have nothing natural left on which to do research!

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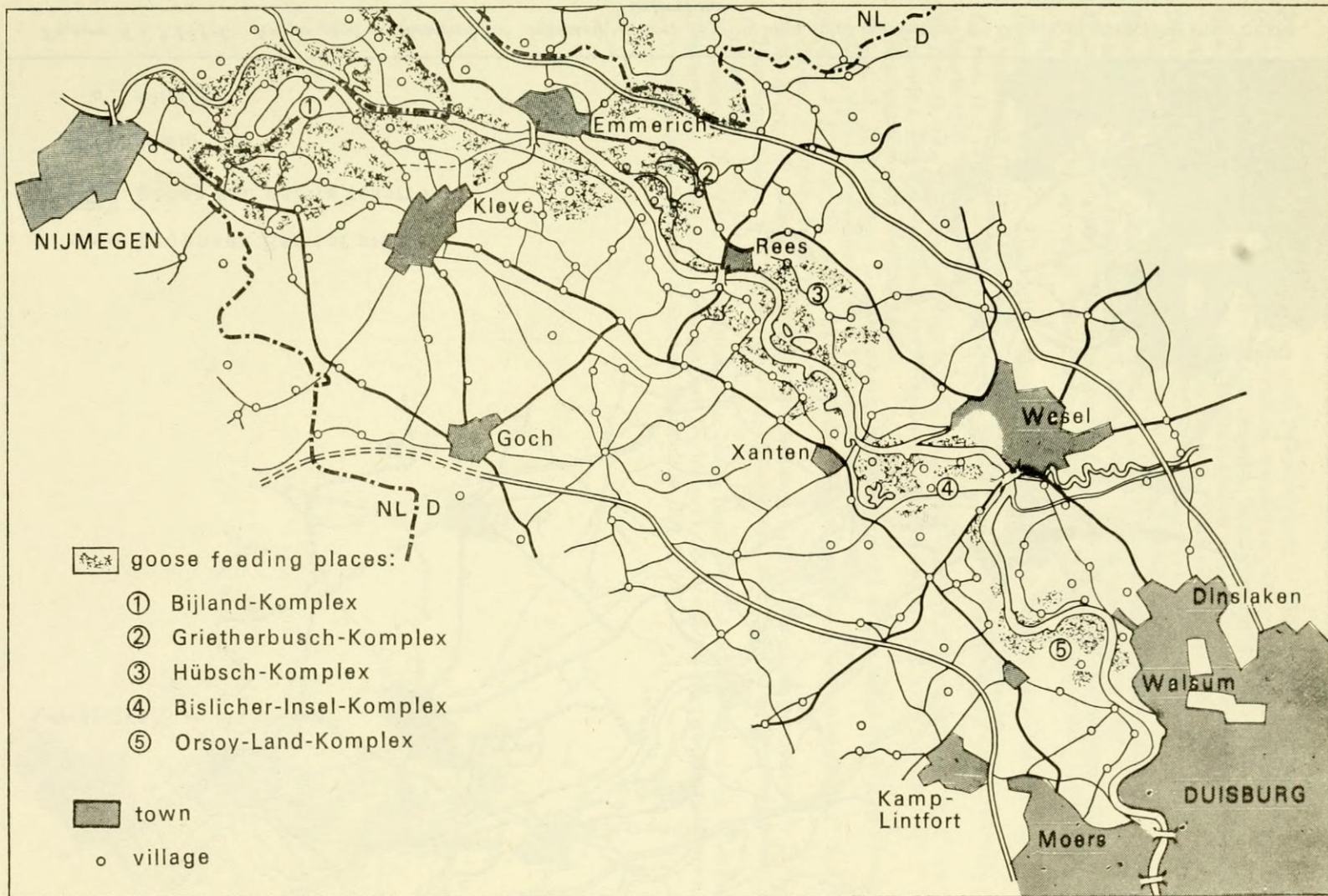


Figure XXXIII/5: Existing and planned nature and goose reserves in the "Niederrhein" area

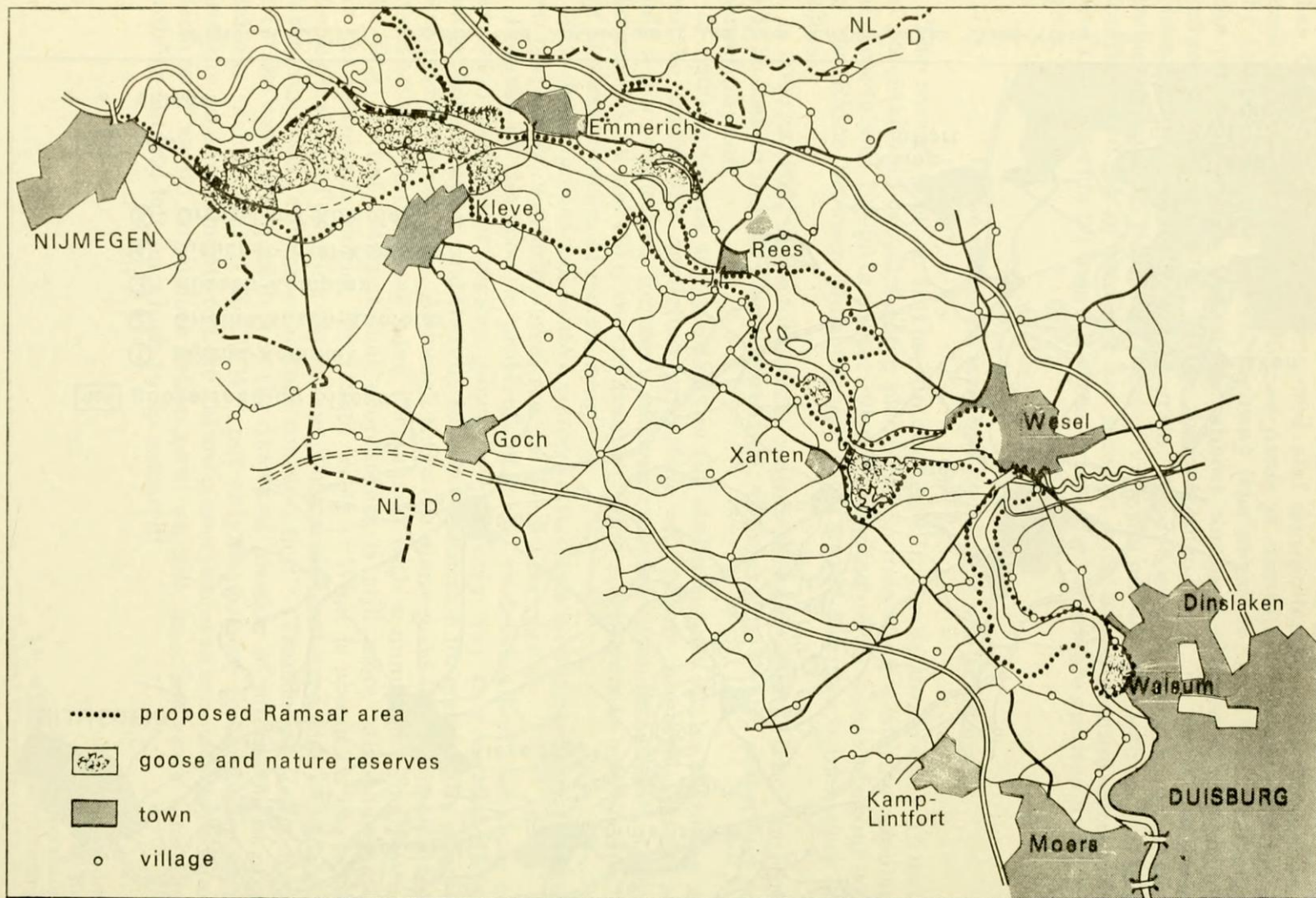


Figure XXXIII/6: Areas used or planned for industry, gravel digging and loud recreation in the goose wintering area at the Niederrhein

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