



United Nations Environment Programme



Distr.
LIMITED



UNEP/OzL.Pro/ExCom/8/25/Add.1
17 October 1992

ORIGINAL: ENGLISH

Executive Committee of the
Interim Multilateral Fund for the
Implementation of the Montreal Protocol

Eighth Meeting
Montreal, 19-21 October 1992

Addendum

MEETING OF THE NEEDS OF ARTICLE 5 PARTIES FOR CONTROLLED SUBSTANCES DURING THE GRACE AND PHASE-OUT PERIODS

SUPPLEMENT

Introduction

1. Pursuant to a request of the Seventh Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol, the Fund Secretariat prepared a draft report for the Executive Committee's consideration on how to meet the needs of Article 5 countries during the grace and phase-out periods (UNEP/OzL.Pro/ExCom/8/25).

2. After the first draft of the report was circulated to the Parties, the Ozone Secretariat requested the Fund Secretariat to calculate controlled substance needs for shorter phase-out periods that will be considered at the Copenhagen Meeting of the Parties. This request is addressed and included in document UNEP/OzL.Pro/ExCom/8/25/Add.1.

The Proposed Copenhagen Revision

3. The proposed revision to the Montreal Protocol to be considered in Copenhagen in November 1992 restricts Article 5 country production and consumption of controlled substances to the following levels by 2004:

- 25 percent of permissible levels of CFC-11, CFC-12, CFC-113, CFC-114 and CFC-115;
- 50 percent of permissible levels of methyl chloroform; and
- zero production and consumption of halons.

By 2006, it is proposed that production and consumption of all controlled substances in Article 5 countries should be zero. The production capacities of controlled substances in Article 5 countries have, therefore, been forecast taking this proposed revision into account.

4. In the draft report on Article 5 needs for controlled substances (UNEP/OzL.Pro/ExCom/8/25), projected demand was estimated taking into account the allowable production under the London Amendment and Adjustments to the Protocol. This projected demand for CFC-11 and CFC-12, CFC-113, methyl chloroform, CFC-114, CFC-115 and halons, compared with their revised allowable production under the proposed Copenhagen Revision, is displayed in figures 1-8.

CFC-11 and CFC-12

5. The annual production capacity of Article 5 countries for CFC-11 and CFC-12 is currently 121,000 tonnes. However, the actual production is only half of this amount. In order

to meet projected domestic demand and projected demand of other Article 5 countries, capacity utilization will have to be increased to 100 percent.

6. Figure 1 illustrates production capacity at 100 percent utilization against projected demand under the Copenhagen Revision. A shortfall in supply amounting to 5,000 tonnes of CFC-12 was predicted to occur in 2007 under the London Amendment and Adjustments. Under the proposed Copenhagen Revision, this shortfall will increase to approximately 37,000 tonnes (CFC-11 and CFC-12) between 2000 and 2005.

7. If production is maintained at the current 50 percent level of capacity, Article 5 countries are guaranteed sufficient supply from their established suppliers in developed countries until the end of 1995. If existing production capacities in Article 5 countries will maintain the same level of utilization and if supply from developed countries will not be guaranteed after 1995, an acute shortage of supply of CFC-11 and CFC-12 would occur. This situation will continue until the end of grace period. The cumulative shortfall of supply would be 325,000 tonnes for the period 1996-2005, as illustrated in Figure 2.

8. If production capacity in Article 5 countries is utilized at the 75 percent level, the shortage in supply will be mitigated but not satisfied in full. In this case, the shortfall would be 165,000 tonnes for the period 1996-2005, as illustrated in Figure 3.

9. Recycling alone of CFC-11 and CFC-12 will not be sufficient to meet the demand in full under both 50 and 75 percent utilization scenarios.

10. However, earlier phase-out in tandem with the proposed adjustment will presumably decrease the projected demand which in turn might result in achieving the balance between demand and supply. It will depend on the extent to which development and transfer of technology could be accelerated.

CFC-113

11. Production capacities in Article 5 countries are not sufficient to meet the current demand, and the balance is established by imports from developed countries. The import demand is projected to be as high as 26,000 tonnes for the period 1992 to 1998, as illustrated in Figure 4. Although the proposed Copenhagen Revision will neither affect the production nor demand in Article 5 countries, it will prohibit the production of this substance beyond 1995 in developed countries. This may lead to a shortfall in supply, estimated at 3,500 tonnes, to Article 5 countries between 1995 until the phase-out in 1999.

12. Recycling of CFC-113 cannot contribute significantly to the reduction of this shortfall. However the main consumers of CFC-113 in Article 5 countries are enterprises owned by transnational corporations. If these enterprises follow the same phase-out schedule as their parent companies in the developed countries, the shortfall may be avoided. On the other hand if this will not be the case, the shortfall will have to be supplied from developed countries.

Methyl Chloroform

13. Article 5 countries are expected to phase-out methyl chloroform by 2005. The existing production of methyl chloroform in Article 5 countries satisfies only about 10 percent of their demand. Thus, the proposed Copenhagen Revision will not affect production level in Article 5 countries against the situation under the London Amendment and Adjustments.

14. A cumulative shortfall of 343,000 tonnes is expected for the period 1992-2004 (see Figure 5). The shortfall is made up by imports from producers in developed countries.

15. Supply from developed countries is guaranteed until the end of 1995. However, the proposed Copenhagen Revision will prohibit production in developed countries after 1995. Article 5 countries demand from 1996 to 2005 is estimated at 175,000 tonnes which can be satisfied only from developed countries.

CFC-114

16. Production capacity and consumption of CFC-114 is shown in Figure 6. Production capacity is sufficient to meet the low demand for this substance as long as production continues. However, there is only one Article 5 producer of CFC-114 and it is not expected to continue production after 1995.

17. Article 5 countries are expected to phase-out CFC-114 by 2000. Although the proposed Copenhagen Revision does not affect Article 5 production and demand profiles against the London Amendment and Adjustments, it requires non-Article 5 countries to cease production after 1995. Article 5 countries are expected to experience a shortfall of approximately 500 tonnes between 1996 and 1999 as indicated in Figure 6.

18. This shortfall can either be met by supply from developed countries, or through an accelerated schedule if phase-out consistent with that of non-Article 5 countries. The latter should be attainable since CFC-114 is used mainly as a propellant in aerosols to dispense perfumes and cosmetics; substitutes and alternatives are available and products can be reformulated, accordingly.

CFC-115

19. The projected demand for CFC-115 is expected to cease in 2002 (see Figure 7). There is no production capacity in Article 5 countries for CFC-115 and therefore Article 5 countries depend on imports from developed countries to meet their demand.

20. The proposed Copenhagen Revision would require developed countries to phase-out by 1996. A cumulative shortage of supply of 790 tonnes would occur between the years 1996-2001 assuming that developed countries meet demand requirements through 1995. Under the London Amendment and Adjustments, a shortage of 150 tonnes would occur in 2000 and 2001.

21. This shortfall might be absorbed by a substitute which has been developed and will soon be on the market.

Halons

22. The projected demand for halons will cease in 2005. The production capacity in Article 5 countries is twice as large as the demand. Therefore, Article 5 countries do not need to depend on imports from developed countries, as illustrated in Figure 8.

23. The proposed Copenhagen Revision requires Article 5 countries to phase-out by 2004. This will only slightly affect Article 5 countries since they will not be able to produce halons, and therefore meet demand, in 2004. This will cause a shortage of supply of approximately 790 tonnes for that year. However, the shortage is sufficiently small and can be met by recovered halons stored for re-use.

FIGURE 1
CFC-11 & CFC-12: PRODUCTION CAPACITY AND PROJECTED DEMAND
IN ARTICLE 5 COUNTRIES

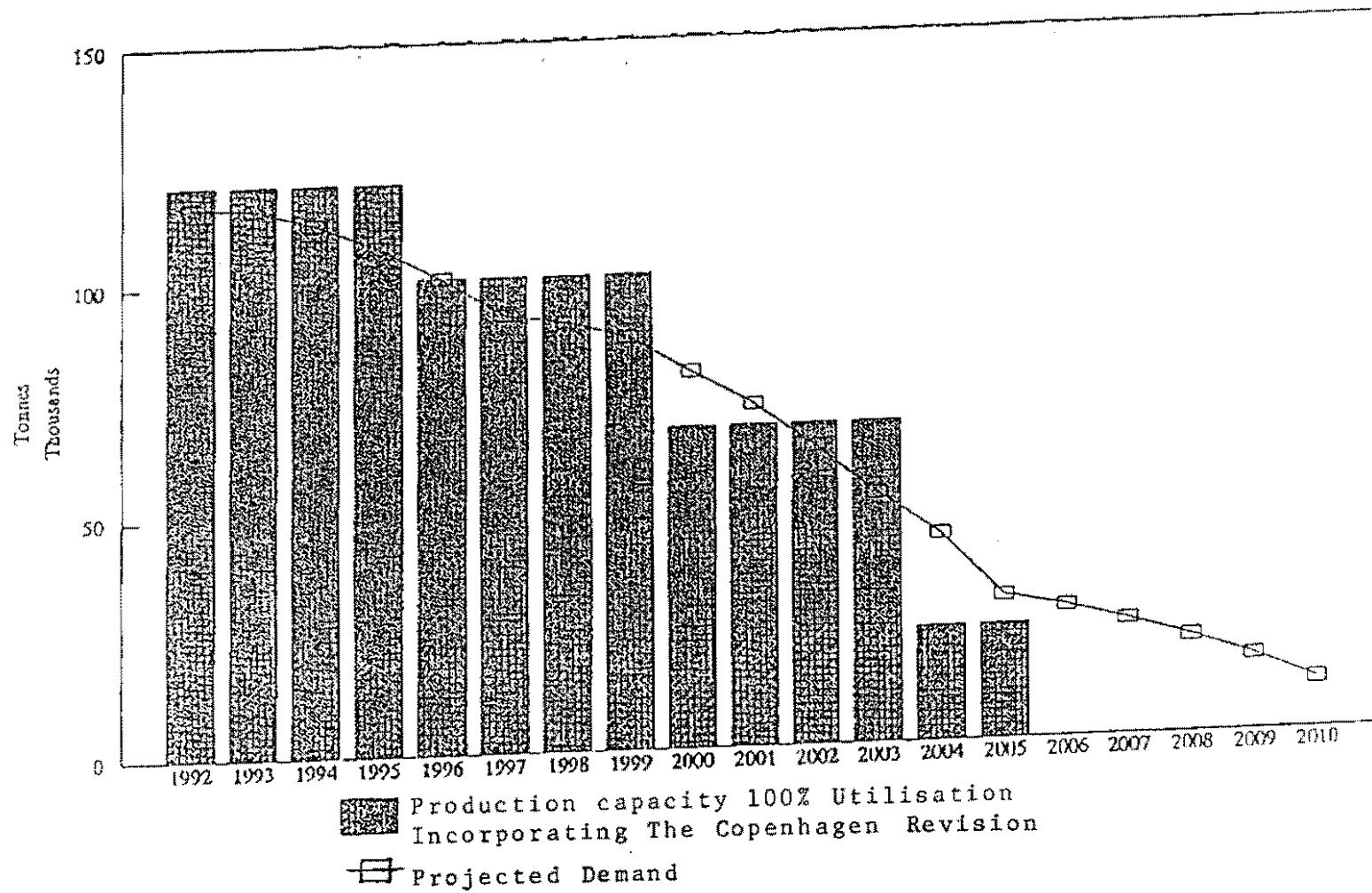


FIGURE 2
CFC-11 & CFC-12. PRODUCTION CAPACITY AND PROJECTED DEMAND
(CURRENT (50%) CAPACITY UTILISATION)

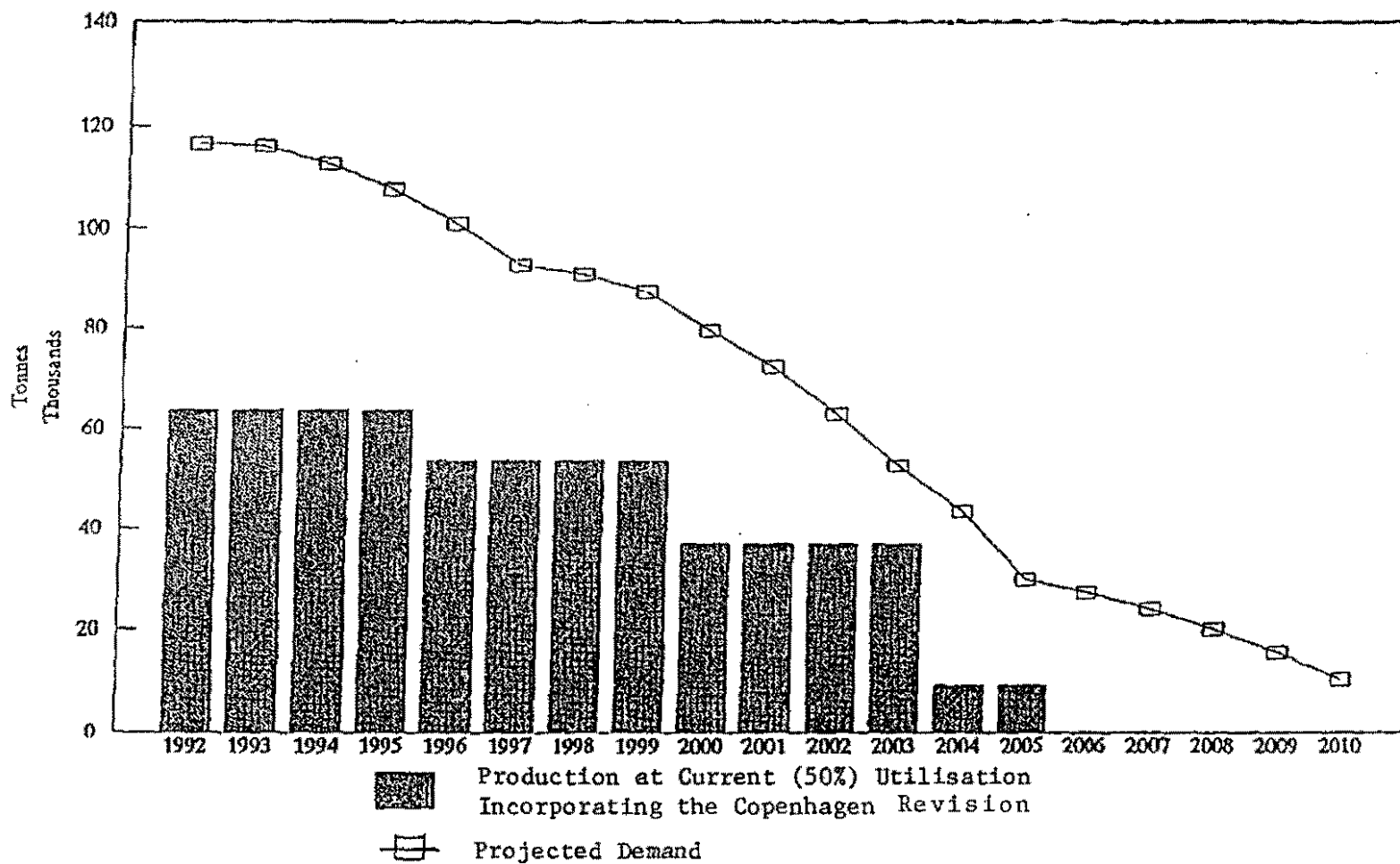


FIGURE 3

CFC-11 & CFC-12. PRODUCTION CAPACITY AND PROJECTED DEMAND
(CURRENT (75%) CAPACITY UTILISATION)

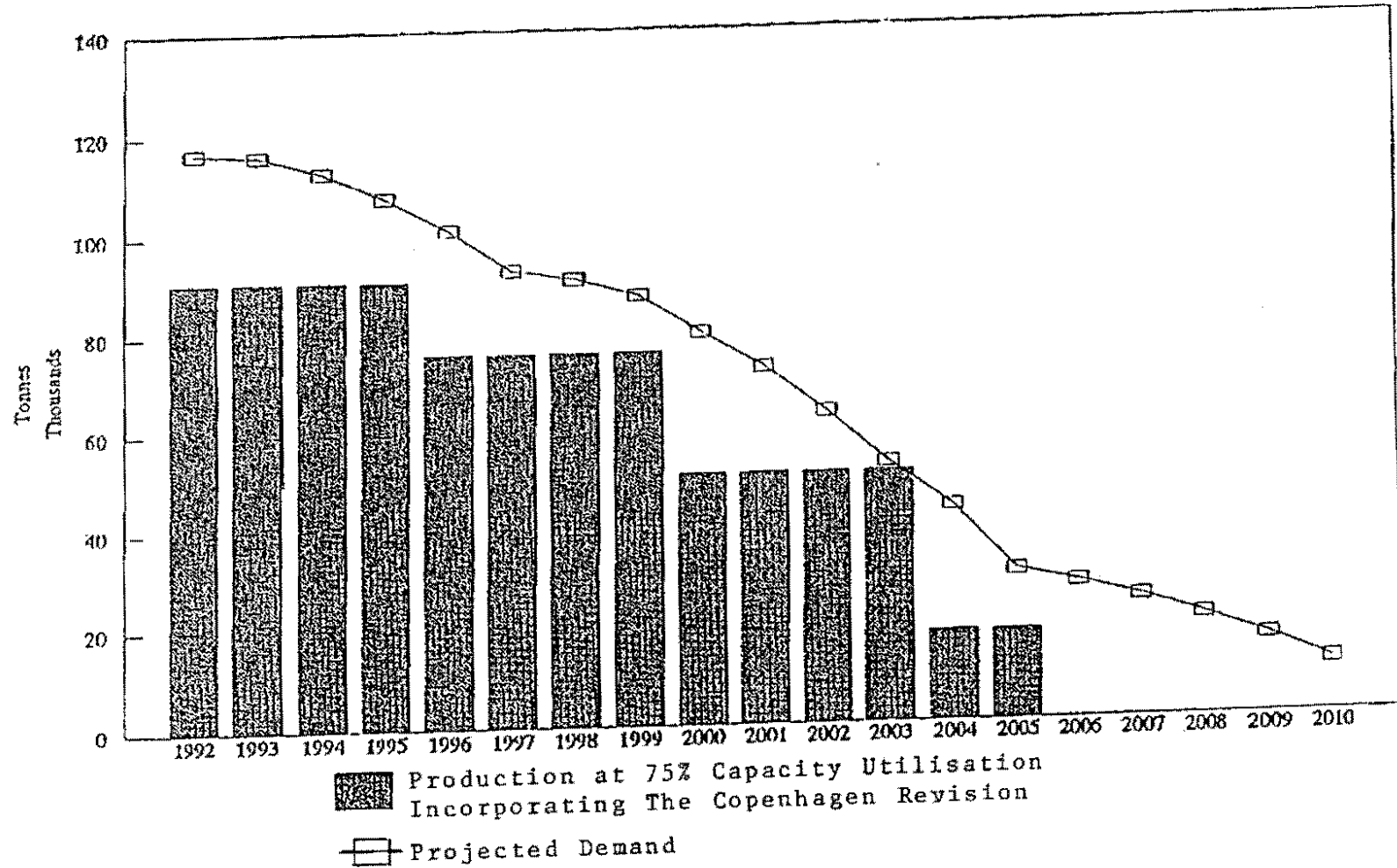


FIGURE 4
PRODUCTION CAPACITY AND PROJECTED DEMAND
IN ARTICLE 5 COUNTRIES

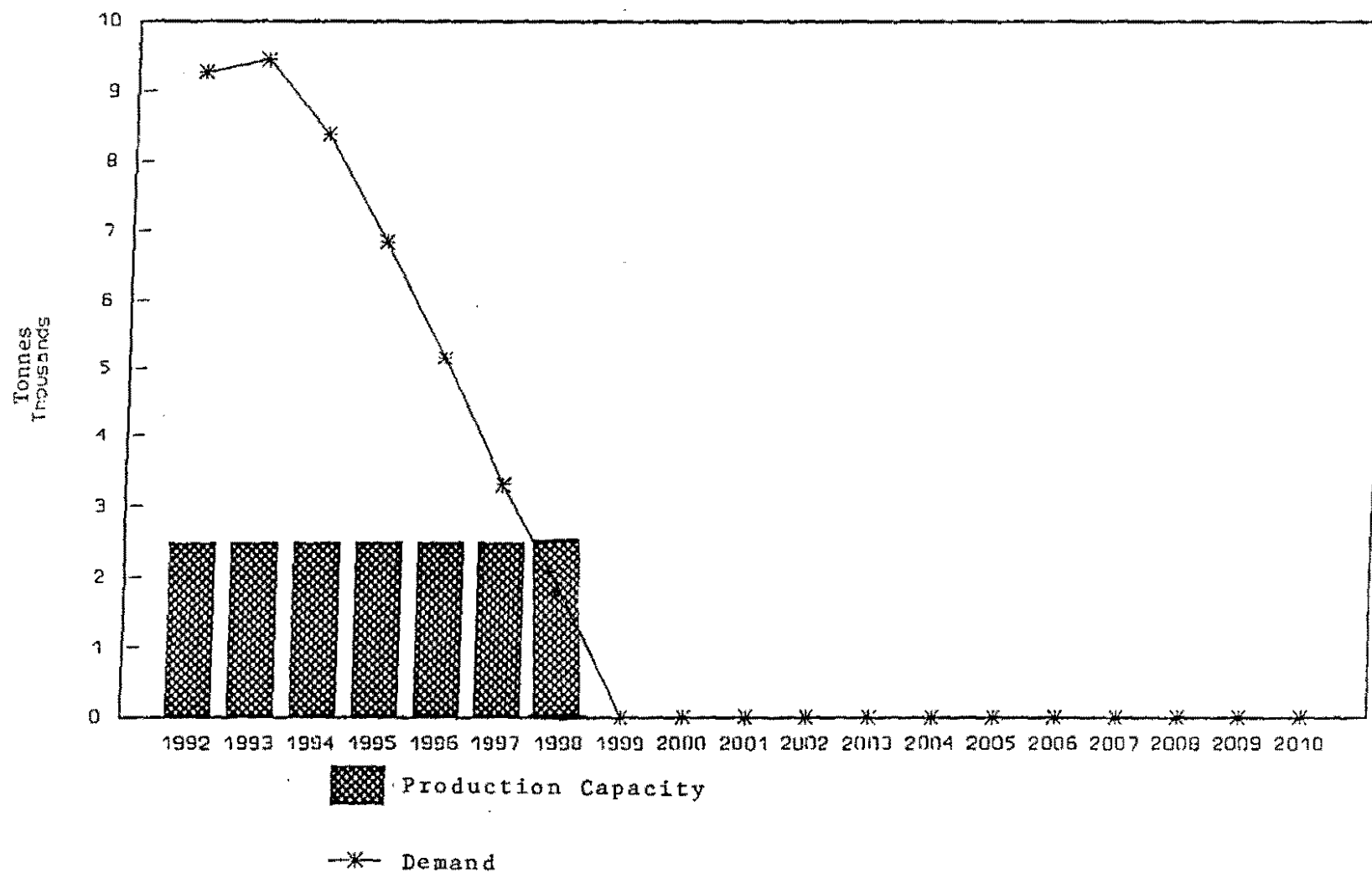


FIGURE 5
METHYL CHLOROFORM: PRODUCTION CAPACITY AND PROJECTED DEMAND

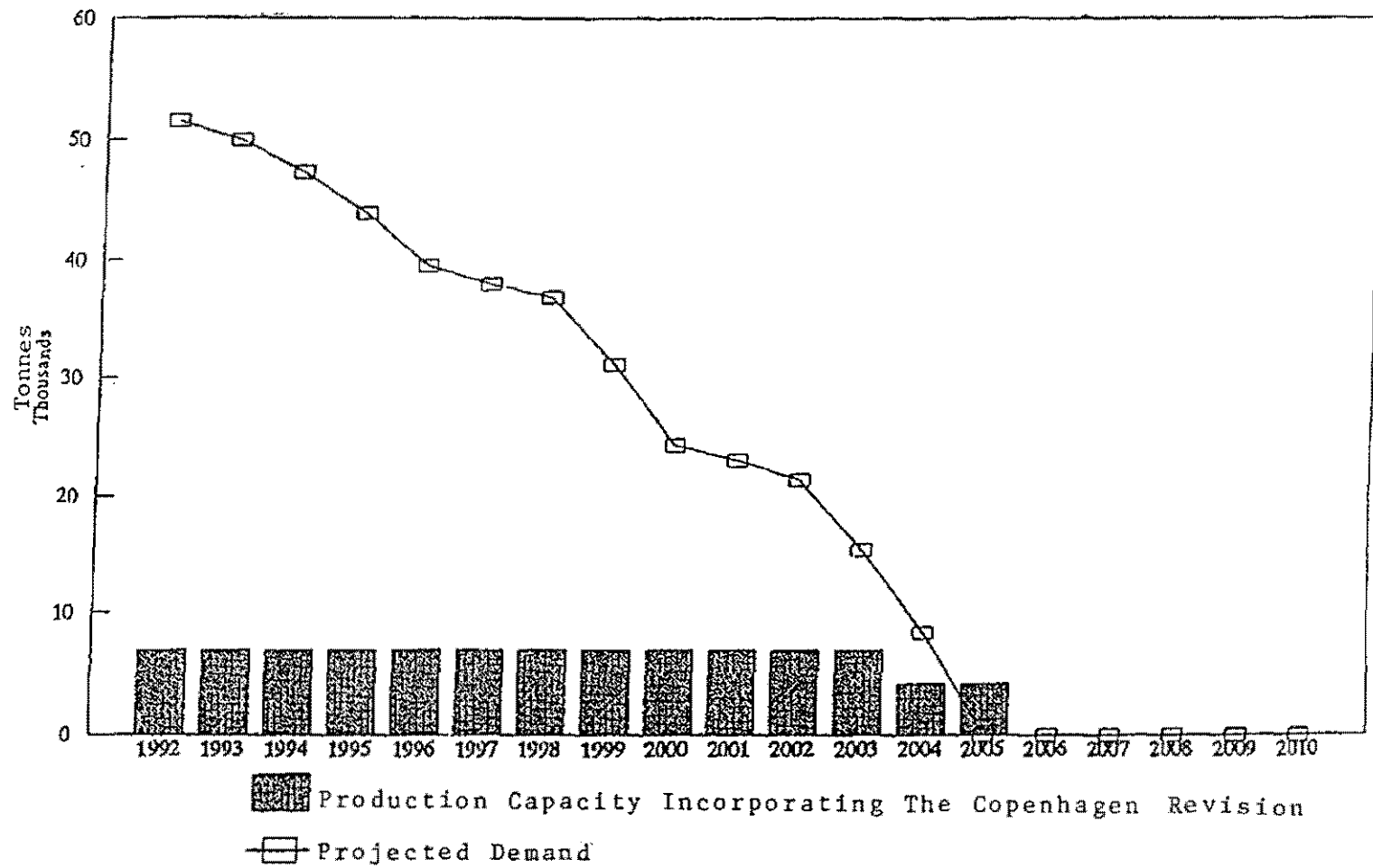


FIGURE 6
CFC-114: PRODUCTION CAPACITY AND PROJECTED DEMAND
IN ARTICLE 5 COUNTRIES

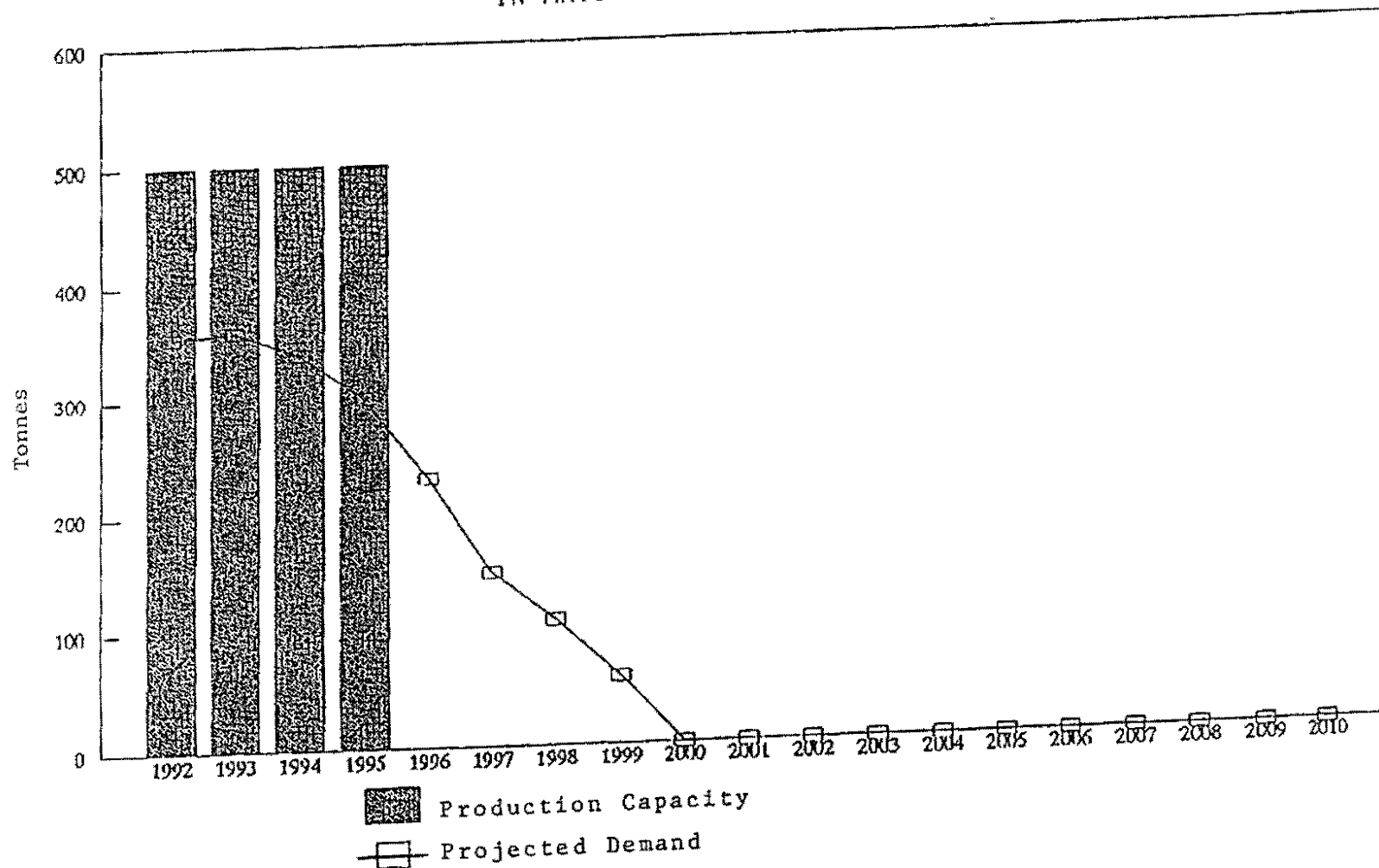


FIGURE 7

CFC-115. PROJECTED DEMAND
IN ARTICLE 5 COUNTRIES

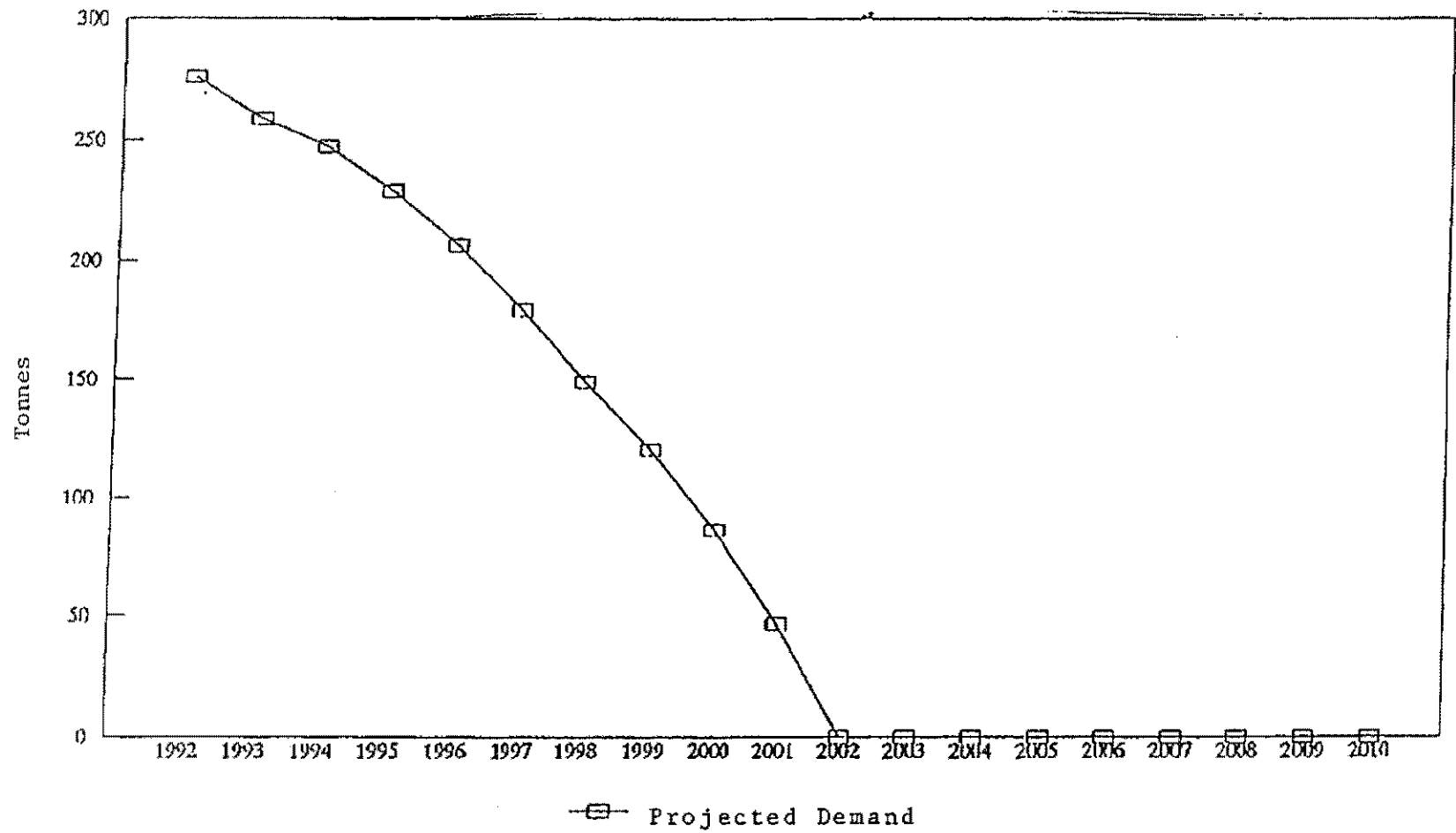


FIGURE 8

HALONS: PRODUCTION CAPACITY AND PROJECTED DEMAND
IN ARTICLE 5 COUNTRIES

