



## **Appendix F – The US approach to Biodiversity Maintenance – The Conservation Reserve Program**

### **BACKGROUND TO THE CONSERVATION RESERVE PROGRAM IN THE USA**

The USDA administers the Conservation Reserve Program (CRP). This program offers compensation to private landholders who divert land from agricultural production to the supply of biodiversity services. The CRP has evolved out of the various Farm Bills that have been in existence since the Great Depression. In the USA, support for the agricultural sector has a long history that goes back to the Great Depression in 1933. In its initial phase, the aim of US farm policy was simply to support farm incomes. The need to support farm income stems from the agricultural sector's history of chronic excess farm capacity. The mechanism for income support has been changed over time. **Table A1** shows that income support to US farmers has been delivered in different ways since the Great Depression. Early government support mechanisms simply transferred income from the general public to the agricultural sector. Farm Bill funds were used to control the supply of commodities and to address soil erosion through programs that set aside acreage. Under this approach, farmers were paid to retire land from crops (thereby reducing the level of soil erosion) but this had some adverse effects:

- farmers retired the worst land and concentrated inputs on the best land – often total production increased per farm; and
- retired land became more productive after retirement adding to production in subsequent years.

**Table A1: Summary of farm income support mechanism in the USA**

<b>Year</b>	<b>Farm support mechanism</b>
1933	Direct government payments Price support (the loan rate)
1950's - 1980	Income support Supply control through diversion of land such as the soil bank Acreage Reduction Programs Farmer owned reserve (farm storage of grain) Export Enhancement Program (incentives to export commodities) Deficiency payments tied to acreage reduction program
1980s	Conservation Reserve Program – soil erosion focus Farmers receive rental payments for redouble land converted to other used
1985-1999	Conservation Reserve Program – Environmental Benefits objective USDA conducts an auction for Farm Bill funds based on (i) the environmental benefits and (ii) the cost

Since the 1985 Farm Bill, assistance given to farmers has been tied to achievement of conservation goals. The USA is now at the eighteenth sign-up of the Farm Bill and funds available from this Bill are allocated through an auction system where farmers must compete with each other to receive government funds. Farm Bill legislation requires that funds be allocated on a competitive basis. To receive funds allocated under the Farm Bill, farmers must now provide environmental services from land under the Conservation Reserve Program.

### **HOW THE CONSERVATION RESERVE PROGRAM WORKS**

Assistance provided under the Farm Bill is available through an auction process. Farmers offer to provide environmental services and provide estimates of the cost of providing these services. This bid is the minimum payment that the farmer will accept to supply the services. It is up to the farmer to decide whether to seek full costs of providing environmental services identified or to seek a proportion of the funds. Full costs can include income forgone because land is taken out of commodity production, as well as the cost of providing and maintaining the environmental service. Farmers know that they are competing with other farmers for funds, so extravagant cost claims may not be successful.

## **THE ROLE OF GOVERNMENT (USDA) IN THE AUCTION PROCESS**

Government is responsible for administering the auction, for auction design, and for some compliance activities. The key element of the auction is the development of an Environmental Benefits Index (EBI). This signals to farmers the relative value of various possible environmental services that might be provided from farmland. The USDA uses cost information from farmers to modify the EBI. These two elements are discussed below.

### **Environmental Benefits Index**

The EBI has been constructed by ecologists to reflect the relative scarcity of different environmental goods and services. The point-scoring system helps identify government objectives. This information is released to the public so that bid strategies can be developed by private landholders.

Each farmer converts the environmental proposal for his farm into an EBI. The government determines enrolment into the CRP by collating and ranking bids according to the EBI, which reflects the ratio of conservation benefits to costs. Each offer is compared nationally with others. The EBI is composed of six environmental factors plus a cost factor. The six environmental factors are:

#### *Wildlife factor (0 to 100 points)*

The wildlife factor scores the expected benefits of the offer and is composed of six subfactors (wildlife habitat cover, endangered species protection, proximity to water, adjacent protected areas, contract size, restored wetlands to uplands percentage). Farmers that develop proposals to improve wildlife habitat gain high scores. These scores reflect relative scarcity of the environmental service in question.

#### *Water quality factor (0 to 100 points)*

This factor evaluates the potential impacts that the bid may provide for surface and ground water quality. It has four components: location, groundwater quality advantage, surface water advantage and wetland benefits.

#### *Erosion factor (0 to 100 points)*

This factor evaluates the potential for land to erode as the result of wind or water. Points are based on an Erodability Index (EI).

#### *Enduring benefits factor (0 to 50 points)*

This factor considers the likelihood of certain practices remaining in place beyond the contract period.

*Air quality benefits from reduced wind erosion (0 to 35 points)*

This factor evaluates the air quality improvement from reducing airborne dust.

*State and National Conservation Priority areas (0 to 25 points)*

This factor evaluates the location of the offer relative to those of national approved Conservation Priority Areas.

**Cost**

Farmers can improve the EBI associated with their bid through their cost strategy. By accepting more of the cost (cost sharing) the EBI points can be increased. This provides farmers with an incentive to offer cost-effective bids. More points are offered if:

1. no government cost-sharing is requested;
2. the offer price is below the Maximum Payment Rate; and
3. the offer price is below the Maximum Rental Rate.

The government provides the following information necessary for the auction:

*Reserve price*

The government signals what it believes is a fair rental price for land in the various counties around the nation. This is done following analysis of the rental price for farmland of different levels of productivity - fertile land has higher rental value than marginal land.

*Assistance in bid formulation*

Government assists farmers to compile their bids. This ends up as an EBI index that in the latest Farm Bill has seven components.

*A competitive environment*

When farmers place a bid, they score points according to the environmental benefits associated with their plan. Farmers formulate a bid strategy in competition with other farmers and knowing the rental rates for various types of land. Farmers nominate a bid price and the area of the contract, and submit a proposed environmental plan expressed as an EBI.

*Pre-auction analysis*

Prior to auction, the Farm Bill indicates the area of land on which the CRP will be available, and the total funds for the program.

To determine the EBI threshold in any year, the USDA conducts an analysis of the relationship between total acres of land operating in the CRP, their EBI, and how

current-year participation can contribute to the overall CRP aim. Essentially, the USDA hopes to maintain a consistently high EBI score per acre of participation.

## **OTHER FEATURES OF THE AUCTION PROCESS**

### **The contract**

Each contract runs for 10 years. After 10 years, there is no automatic renewal. Farmers can apply for a new contract through the bidding process if they choose.

### **Transaction costs**

Transaction costs for these programs are relatively high. Unsuccessful bids incur preparation costs, and the USDA is required to help farmers prepare bids and to check on compliance.

### **Effectiveness**

The auction approach based on EBI and cost components is a highly targeted approach. It provides high levels of accountability to government and is a competitive system.

### **Community acceptance**

There is an extremely high level of community acceptance for the CRP scheme. The environmental focus of the CRP, particularly with the inclusion of wildlife habitat as a focus, is very popular with the American public. Politicians in the USA like the scheme and requested an expansion of the EBI approach for the last Farm Bill. Farmers like the scheme and seem to have little trouble preparing bids. EBI scores are confirmed over the counter when farmers are required to submit their bids. Only export companies affected by reduced commodity exports from the USA are not happy with the program.

