

① Croissance naturelle d'un stock de poisson.

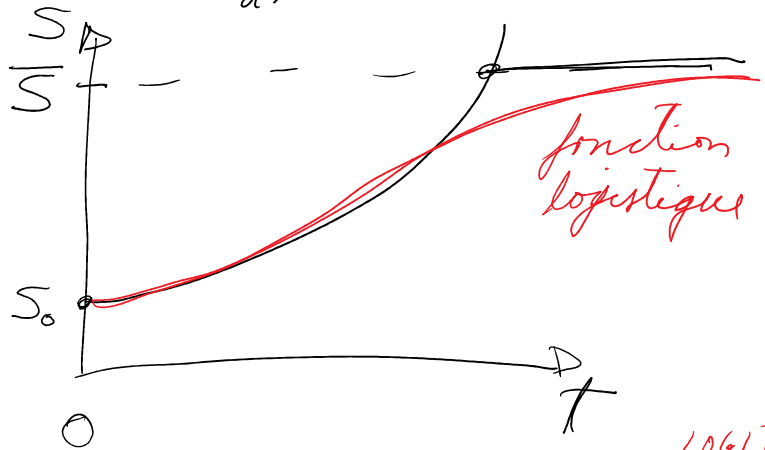
P : taux de croissance "intrinsèque".

$S(t)$: taille du stock en t .

$$\frac{dS(t)}{dt} = P S(t) \quad \dot{S} = \frac{dS}{dt} = P S$$

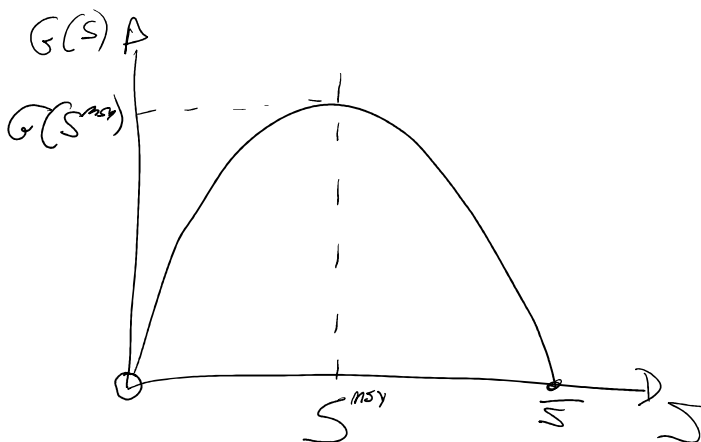
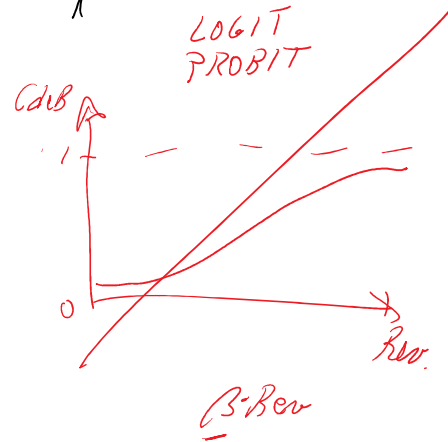
$$\frac{\dot{S}}{S} = P$$

$$S(t) = S_0 e^{Pt}$$



$$G(S) = P \left(1 - \frac{S}{\bar{S}}\right) S = PS - P \frac{S^2}{\bar{S}}$$

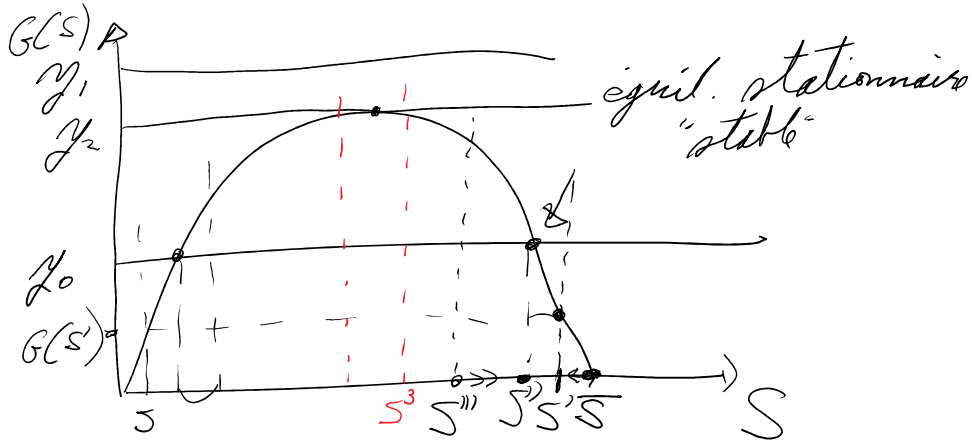
$G(S)$ = taux d'accroissement naturel du stock.



MSY: Rendement max. durable.

ACTIVITÉ HUMAINE

y : qte pêchée "en continu".



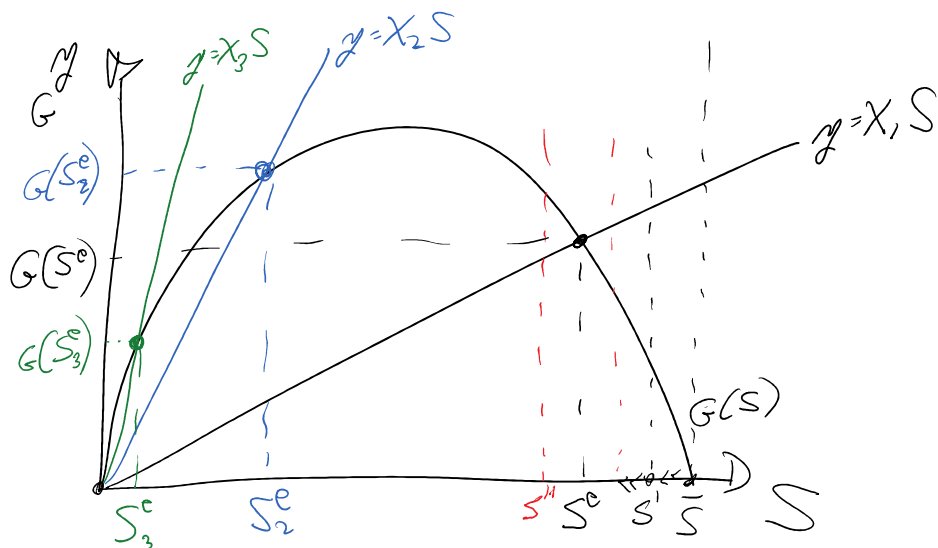
EFFORT DE PÊCHE:

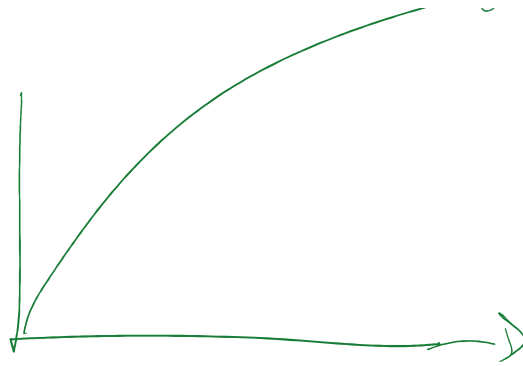
$$y = X S$$

SOIT L'EFFORT X_1

$$X_2 > X_1$$

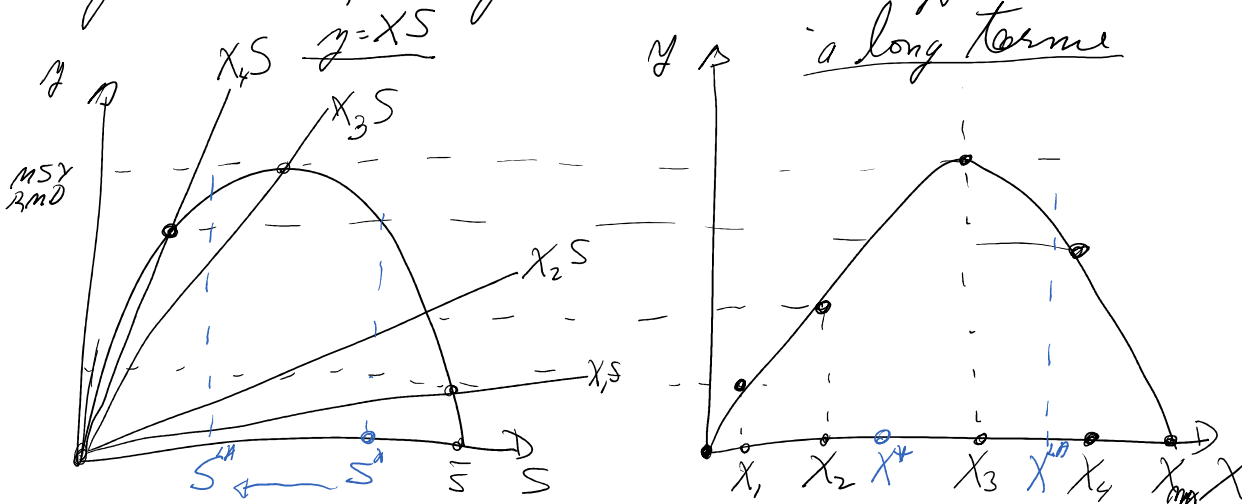
$$X_3 > X_2$$





INTRODUCTION DES ASPECTS ÉCONOMIQUES

production en fonction de l'effort:



soit p = prix d'une tonne de poisson
 c = coût unitaire d'un bateau

$$RT = p \cdot y$$

$$CT = cX$$

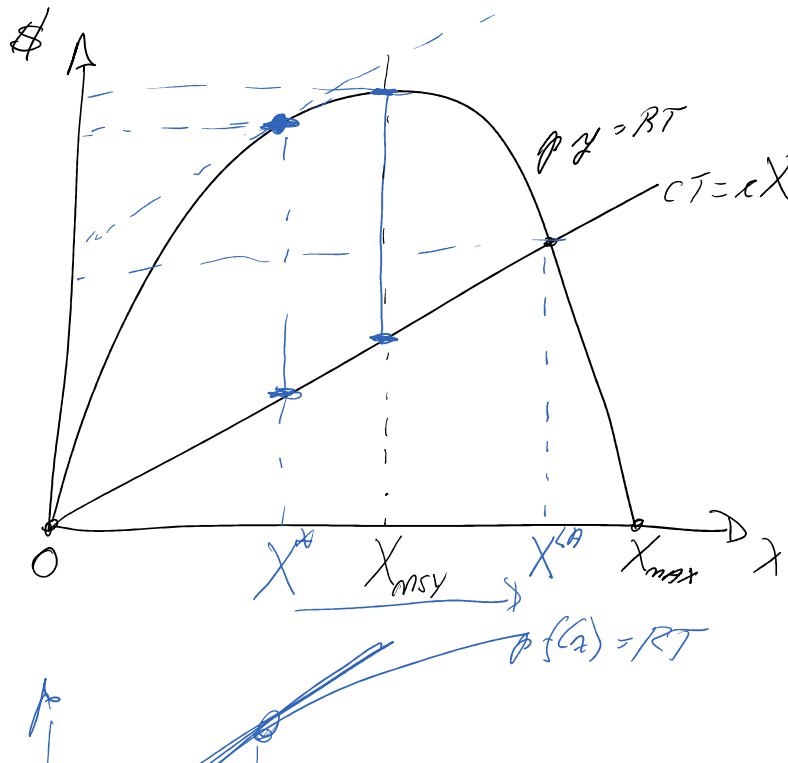
$$\pi = p \cdot y - cX$$

$$= RT - CT$$

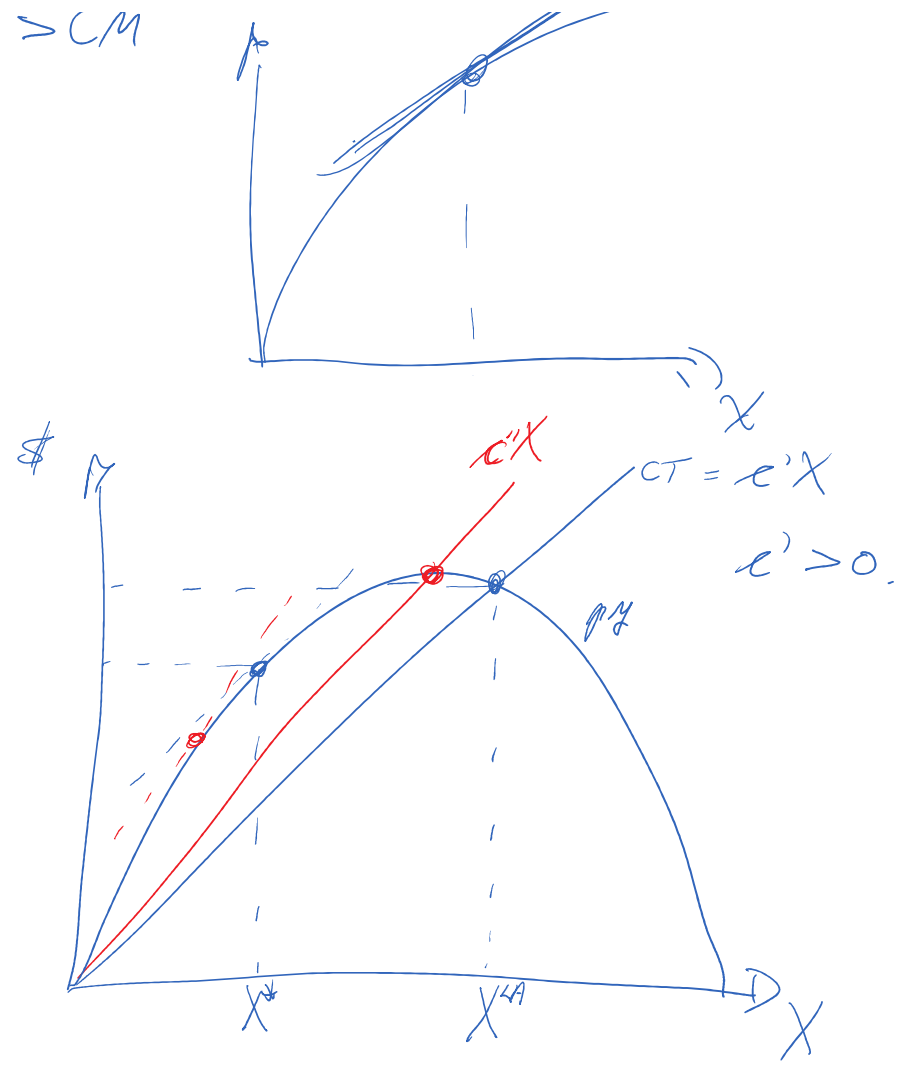
$$CM = \frac{CT}{X} = \frac{cX}{X} = c$$

$$RM = \frac{RT}{X} = \frac{p \cdot y}{X}$$

$$\frac{d}{dX} : RM > CM$$

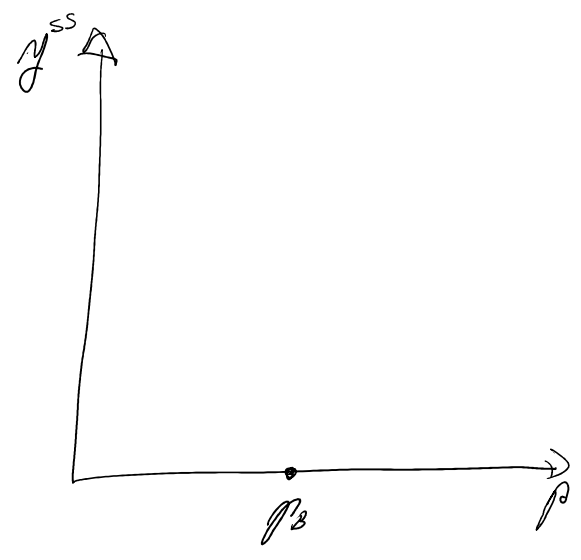
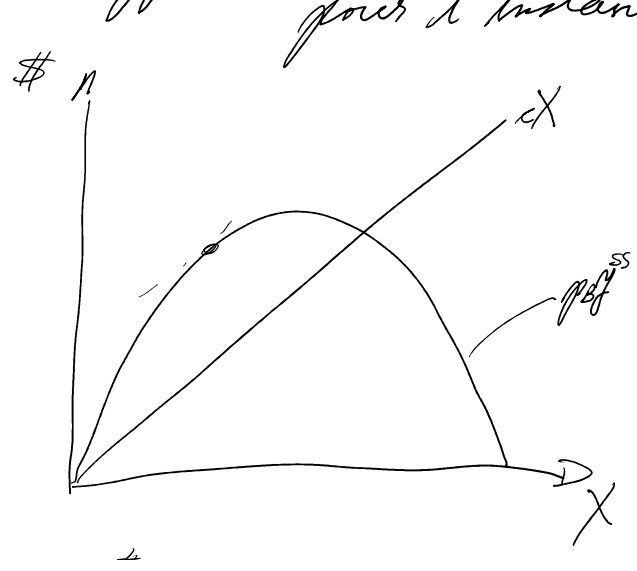


$\bar{a}X$: $KM > CM$



Libre accés et offre "renversée"

① Supposons un droit de propriété pour d'instant



$\rho_B = 1$

,

,