

**Senate Standing Committee on Rural and Regional Affairs and Transport**

**ANSWERS TO QUESTIONS ON NOTICE**

Additional Estimates February 2008

**Agriculture, Fisheries and Forestry**

**Question:** ABARE 01

**Division/Agency:** Australian Bureau of Agricultural and Resource Economics

**Topic:** GTEM economic model

**Hansard Page:** written question

**Senator Siewert asked:**

*GTEM economic model*

Can ABARE confirm that it recently put its GTEM economic model (global trade and environment) into the public domain?

- a. When did this happen?
- b. What was the reason for this decision?
- c. Who made it?
- d. How many staff hours were spent producing this model?
- e. Do you have an estimate of its value?
- f. Are you aware of anyone in particular now using this model or publishing results that rely on it?
- g. Is this a model that anyone could simply pick up and use?
- h. What do you need to know to be able to use it effectively to produce robust and reliable results?
- i. Is it accurate to say that to be able to use this kind of model effectively you need to have intimate knowledge of its development, the way it works and the assumptions it makes?

**Answer:**

- a. The Australian Bureau of Agricultural and Resource Economics (ABARE) first placed documentation and code for the Global Trade and Environment Model (GTEM) on its website in 2002. ABARE last updated the model documentation in November 2007 and expects the code to be updated in the coming months.
- b. ABARE's objectives in publicising GTEM are:
  - i) to improve the transparency of GTEM,
  - ii) to encourage further development of the model
  - iii) to improve Australia's modelling capacity in relation to international issues.
- c. The Executive Director of ABARE.
- d. It is not possible to fully estimate the amount of time taken to develop the model. Work commenced on the development of GTEM in 1998-99, drawing on the key features of ABARE's earlier general equilibrium model Megabare. Further refinements and updates to GTEM and its database are ongoing.
- e. No.

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- f. ABARE uses GTEM and publishes results based on the model. The Commonwealth Treasury Climate Change Modelling Unit is using the model at present.
- g. No.
- h. GTEM is intended for use by people who have professional knowledge and expertise in the field of computable general equilibrium modelling and GEMPACK programming language. Users need to have a complete data base and various modelling assumptions underlying the model reference case to use the model.

Users do not have to have intimate knowledge of the development of the model, however they must have technical knowledge and expertise in understanding the theory behind the model, its data base and how the model works and the set of assumptions underlying the model reference case.