

# Globalization of Agriculture: Effects on Social and Natural Systems in Rural Communities in Jamaica



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# Purpose of this Presentation

- ❖ The purpose of this presentation is to produce a qualitative analysis of:
  - ❖ the socio-economic
  - ❖ socio-cultural and
  - ❖ environmental impacts

of the production and export of primary agricultural products from local communities in Jamaica, and global policies and institutions that are formulated to maintain the system.

- ❖ The focus is mainly on the external forces that have persistently influenced the use of natural resources and re-structure the socio-economic systems of vulnerable small rural communities

# BACKGROUND AND PROBLEM

- ❖ In order to participate in the global economy, Jamaican small farmers are increasingly cultivating export crops on hilly terrain.
- ❖ As a parallel, the small farming economy is being negatively affected by the importation of certain crops under trade liberalization
- ❖ This has led to the mounting disruption of the natural ecosystems and socio-economic settings.
- ❖ As a parallel, local communities' right to endogenous economic development is subdued by the policies of global economic and trade institutions.



# Jamaica: Location relative to the USA



# Significance

I will examine the changing structure of rural economies, and how they contribute to environmental problems and how they might be reformed. This type of analysis is important because:

- ❖ Globalization radically transforms already vulnerable sub-global spaces such as small remote rural communities
- ❖ It is important to assess the effects of the globalization of agriculture and trade liberalization on poor small farming communities because they are often **overlooked entities** in the homogenization and “one size fits all” policies of international economic institutions
- ❖ Also, it is important to study these poor small rural communities as they often bear the brunt of the inequality generated through globalization
- ❖ The incidence of poverty has always been highest in rural Jamaica (24.1%), while for the Kingston Metropolitan Area it is 7.6% and other towns 13.3 percent (Jamaica Survey of Living Conditions, 2001)

[A family of five is said to be living in poverty if its total annual consumption is less than J\$178,906 (US\$ 3889 - 2002) ]

# Research Questions

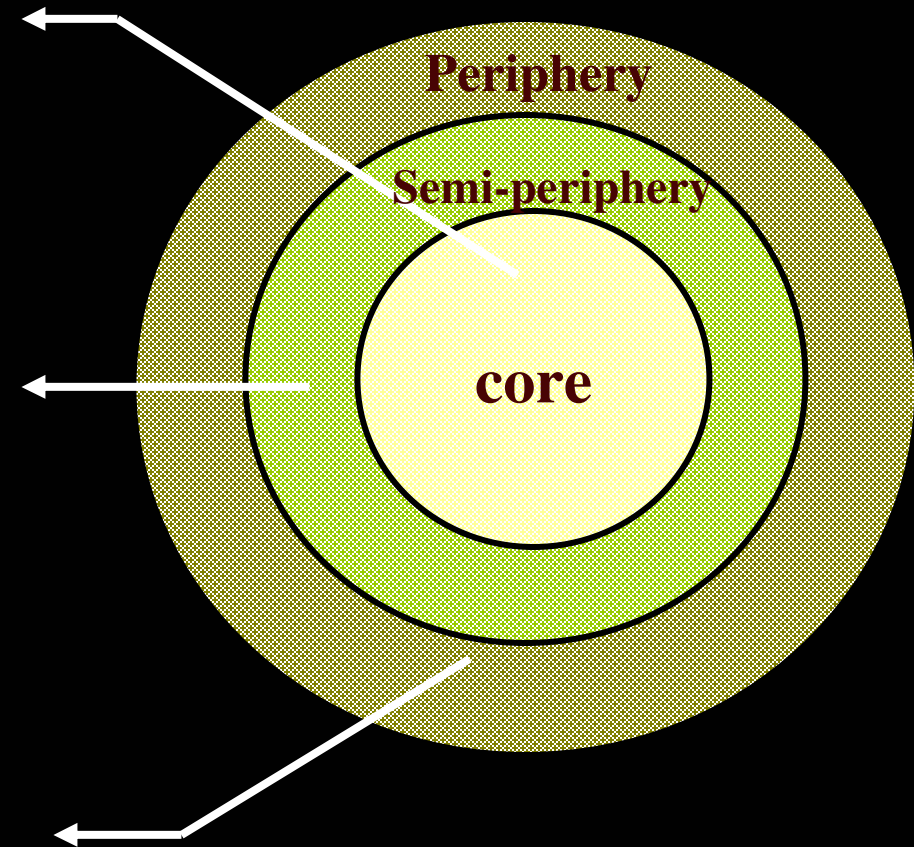
- ❖ **What is the origin of economic dependency, and the associated land degradation in Jamaica?**
- ❖ **Does the overseas retail price reflect the real costs of the fruit?**
- ❖ **Who should absorb externalities in the global market place?**
- ❖ **What are the local socio-economic, socio-cultural and ecological consequences at the community level of Jamaica exporting the fruit of the land?**
- ❖ **What are the changing spatial and temporal contours of livelihood activities and quality of life in small rural communities that result from the exportation of the fruit of the land, and trade liberalization?**

# Theoretical Framework and Method

- ❖ **Wallerstein's World-Systems Theory**
- ❖ **Globalization of Agriculture**
- ❖ **To address the above questions I draw on information obtained from several participatory field studies that I executed in over 21 rural farming communities in Jamaica between 1990 and 2000.**
  - ✓ **This includes a 8-month long participatory observation among small hillside farmers which allowed inductive and descriptive analysis of small farm families, and their relationship with the environment and their communities and their economic strategies.**

# WALLERSTEIN'S WORLD SYSTEMS THEORY: Global Inequality in Resources and Power - Three-tier structure of the world-system of capitalism

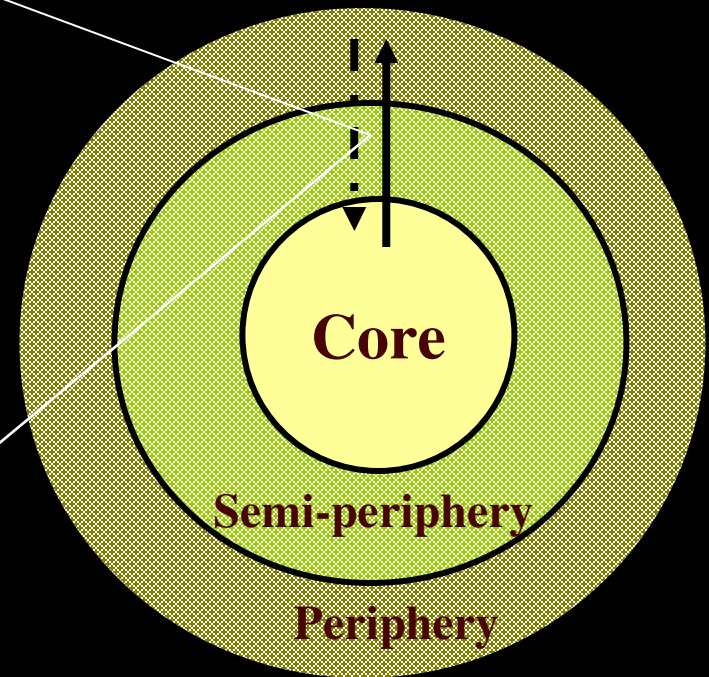
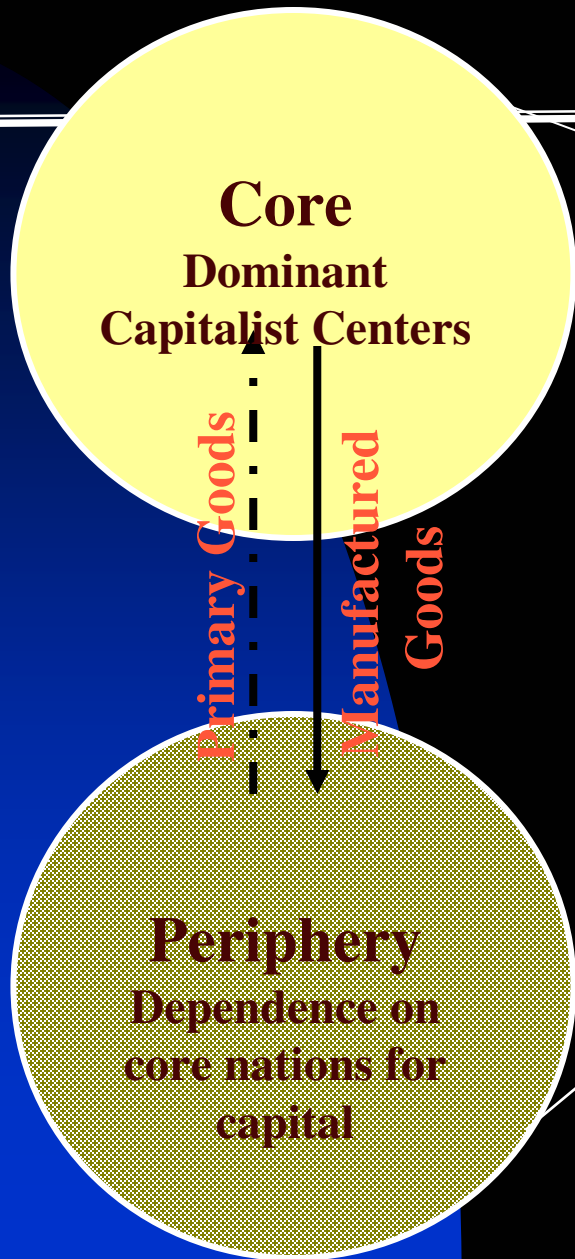
- 1. Core** - The most developed, powerful and affluent nations
- 2. Semi-periphery** - intermediate in terms of their wealth, political autonomy and degree of economic diversification
- 3. Periphery** - the most powerless, with a narrow economic base of agricultural products or minerals, often providing cheap labor for MNCs.





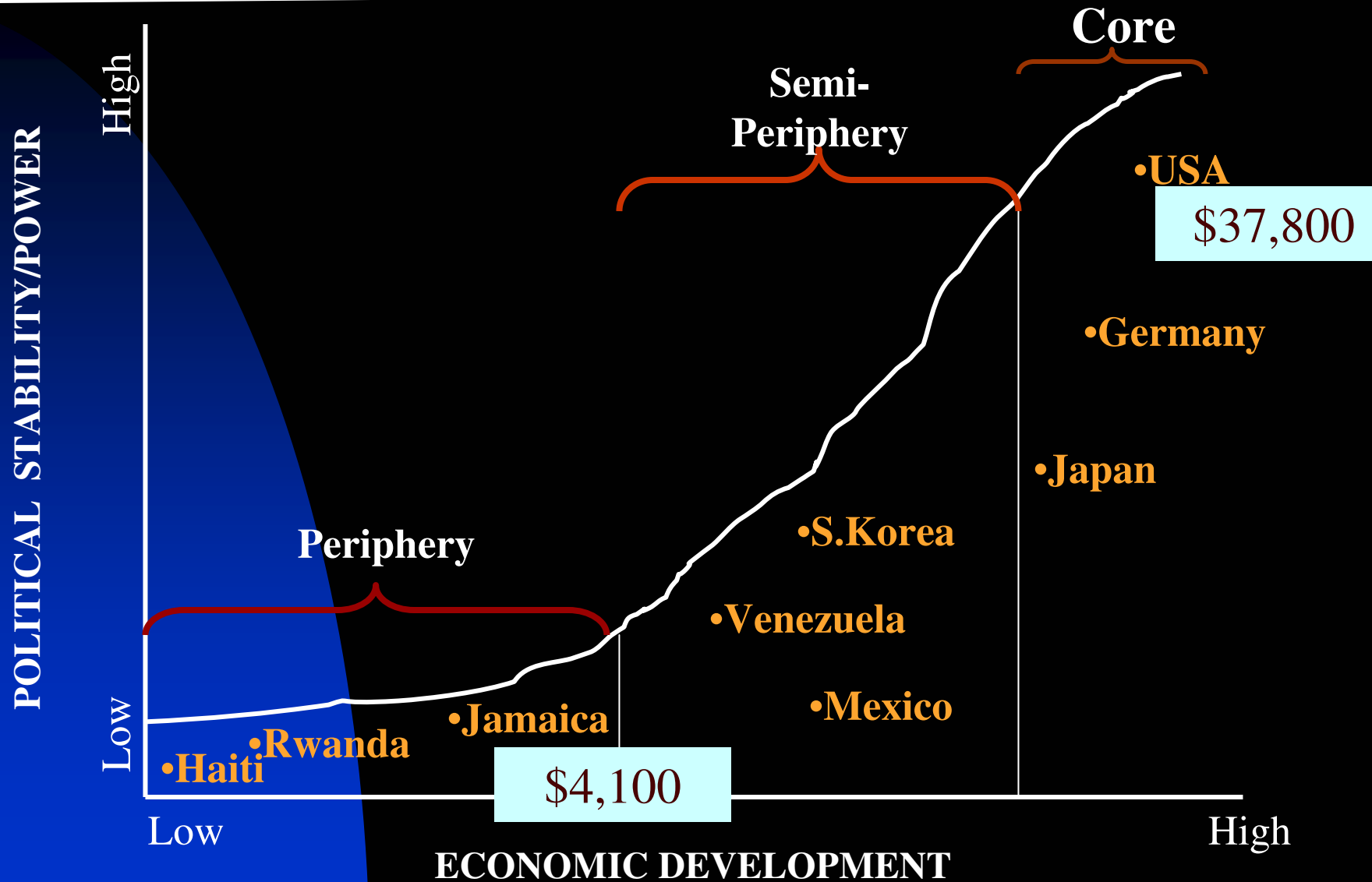
# WORLD SYSTEMS THEORY: Core/Periphery Relations

Powerful wealthy core dominates and exploits the weak and poor peripheral countries



Trade Between Societies

# WALLERSTEIN'S WORLD SYSTEMS THEORY (cont'd)



**Economic Development:** a rise in the average standard of living associated with economic growth; a rise in per capita income.

# Theory of Globalization

- ❖ Increasingly, contemporary social theorists are endorsing the view that globalization encompasses changes in the spatial and temporal contours of social existence.

# Globalization a process of:

- ❖ **The world being integrated (e.g. economic integration, the growth of MNCs and global financial markets)**
- ❖ **A worldwide diffusion of practices**
- ❖ **The expansion and intensification of relations across continents**
- ❖ **The idea of organization of social life on a global scale –an increase in the geographic range of locally consequential interactions (especially across international and intercontinental limits)**
- ❖ **The spread of shared consciousness**
- ❖ **Deterritorialization, which manifests itself in many social spheres**
- ❖ **Internationalized capital flows**
- ❖ **Integration of national societies into a global network of trade, and the new international division of labor**

# Globalization of Agriculture

- ❖ The central elements behind trade liberalization and the globalization of agriculture include the idea that **liberal capitalist economies and free trade will increase food production and multiply prosperity for farmers across the world and alleviate poverty and hunger**

# Rural Social Space: Produced, Shaped and Transformed by Capitalism

- ❖ The trajectory of agricultural production and marketing in Jamaica has been largely shaped by external forces, rather than the local consumption and development decisions within local communities
- ❖ Much of the current economic dependency and land degradation problems linked to the agricultural sector of Jamaica have their roots in the European political-economic system and neo-European capitalist systems like the United States
- ❖ Colonial rule initiated the integration of Jamaica into the global economy and the capitalist world system and launched her on a course of dependency on the economies of the developed world
- ❖ From the beginning Britain did not promote broad-based industrial production infrastructure in Jamaica, which positioned the country in a economic disadvantage state

# History and Dependency

- ❖ **This kept the largely agrarian economy dependent on the industrialized world for the consumption of the island's primary products.**
- ❖ **Independent Jamaica continued the colonial model of development.**
- ❖ **Rural agricultural communities face difficulty in achieving consistent economic growth.**

# Structure of Jamaican Agriculture

## Structural Dichotomy

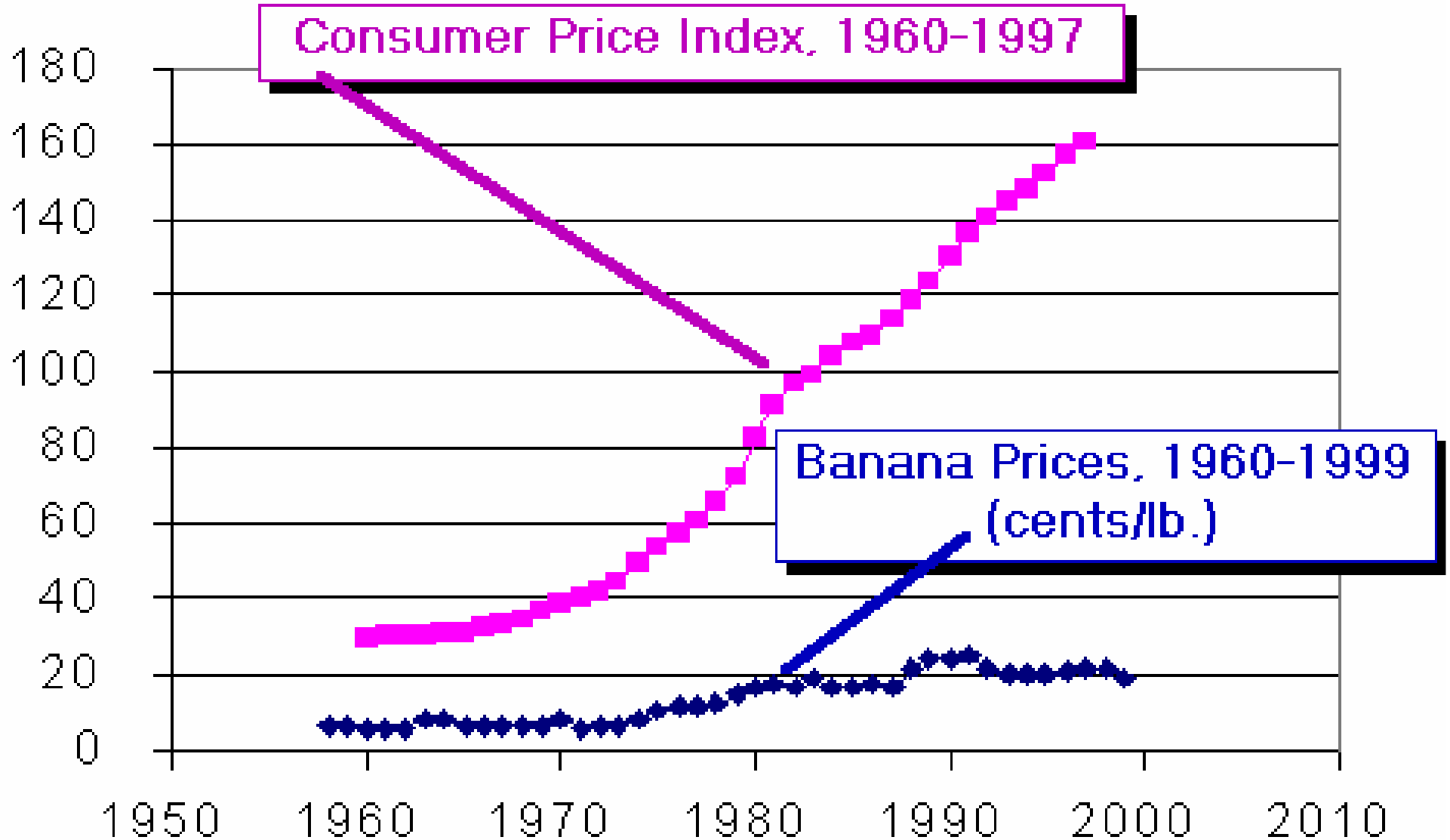
- ❖ On one hand, there is a **large-scale sector** which produces crops such as banana, coffee and sugarcane, for the global market. This sector originated in the period of colonial expansion in the eighteenth and nineteenth centuries when the economy was based on plantation agriculture and slave labor
- ❖ On the other hand, there is a **small-scale sector** which accounts for the greater proportion of farm labor and produces a wide range of crops such as banana, plantain, yam, root crops, legumes and a range of tropical vegetables. Some of these crops are produced for the domestic market, and some for the global market
- ❖ Access to land (though often marginal land) is the chief resource for many of these rural small farmers. The small-scale sector, the focus of this paper, emerged significantly after the slaves were freed in 1838 and they withdrew from the large plantations and began planting their own plots of 25 acres or less



# “The Development of Underdevelopment”

- ❖ Economic inequalities and dependency found in Jamaica and other Caribbean nations today, have direct roots in historical colonial capitalism.
- ❖ Primary products were exported to the mother country (Britain) and the island imported secondary goods. Things are not very different now from how they were two centuries ago.
- ❖ Dependence on commodity exports has meant that Jamaica has had to deal with fluctuating and frequently declining prices for their exports.
- ❖ At the same time, prices for imports have remained constant or have increased. At best, this decline in the terms of trade has made development planning difficult; at worst, it has led to economic stagnation and decline.
- ✓ Terms of trade is the ratio of export to import prices: the ratio of a nation's export prices to its import prices, used to measure a country's trading position.

# Prices for primary products rise relatively slowly. Prices for secondary goods increase more rapidly



# Land Degradation and the Global Market

- ❖ Land degradation and the dependency system is embedded in the global power structure
- ❖ Here I argue that the Wallerstein historical economic model has a major shortcoming: its disregard for the environmental limits and costs of the relationship between the core and periphery
- ❖ Insufficient room is given to players like the small farmers who are a major part of the social organizations in the periphery that help to fuel the global market system
- ❖ Also in the globalization process, small farmers are often treated as oblivious players in the periphery, yet they are the ones doing the hands-on jobs which ultimately impact on the quality of primary produce and the extent of environmental degradation

# Land Degradation and the Global Market

- ❖ **No discussion of contemporary environmental degradation can afford to be ignorant of the enormous importance of international forces**
- ❖ **Ecological constraints, and land degradation and its human cost should be incorporated within any discourse on global capitalism**
- ❖ **Continued trade dependence between rich core nations and the periphery increases the poverty gap, as well as land degradation**

# Land Degradation and Jamaican Small-Scale Agriculture

- ❖ **Natural conditions in Jamaica, for example heavy rainfall and the steep slopes (many slopes greater than 40 degrees) lead to serious erosion and water loss**
- ❖ **Much of the soil is highly erodible and not quickly regenerated. Erosion of watersheds due to farming has become extensive**

# Land Degradation and Jamaican Small-Scale Agriculture

- ❖ All 26 watershed management units in Jamaica are severely degraded
- ❖ Small Farming activities contribute extensively to the degradation of watersheds
- ❖ Over 170,000 Jamaican small farmers cultivate just under 605,408 acres, (245,000 hectares) and use unsuitable agricultural practices, which leads to - **massive soil loss through soil erosion, siltation of drains and rivers and destructive flooding downstream**

# Land Degradation and Jamaican Small-Scale Agriculture

- ❖ In 1995, deforestation was estimated to be occurring at a rate of 24,711 acres (10,000 hectares) per year
- ❖ This, coupled with poor agricultural practices, results in a loss of over 80 million tons of topsoil each year (“Slash and Burn” method often leads to forest fires)

# Rural Communities-Ecological Challenges

- ❖ Free trade weakens communities by freeing Multinational Corporations to exhaust the local natural-resource base.
- ❖ The cumulative indirect economic costs and social dislocations resulting from the production of export crops within rural communities has not been quantified owing to a dearth of systematic documentation of land degradation.



# Rural Communities-Ecological Challenges

- ❖ As land become depleted, small farmers increasingly utilize government forestry land for farming (squatting) as the watersheds become degraded
- ❖ The consequences of continued high rates of erosion on the watersheds remains costly for the society
- ❖ In Jamaica, most of the hillside farmers are resource-poor, and do not have a land conservation culture

# Rural Communities-Socio Economic- Challenges

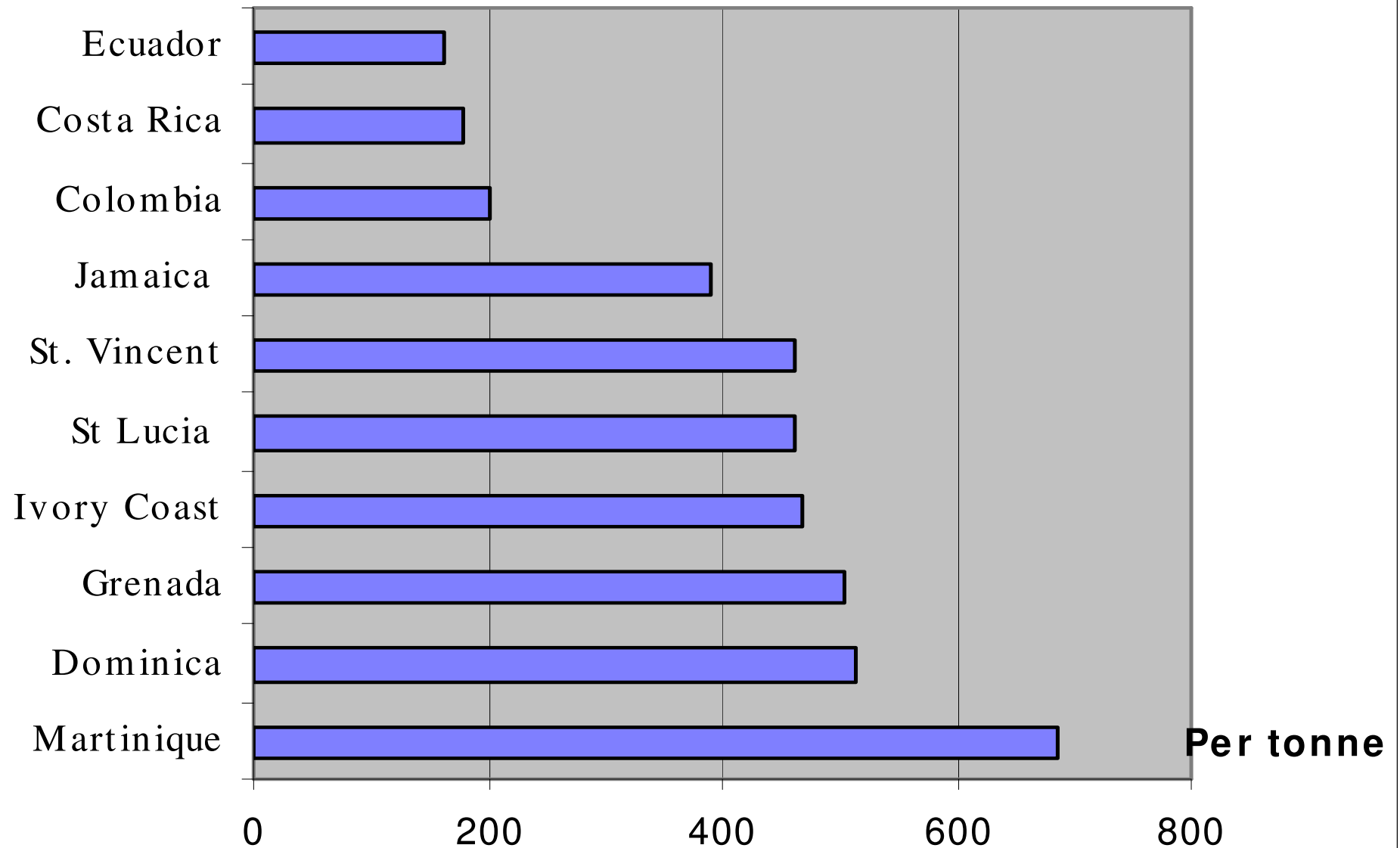
- ❖ Small hillside farmers participate in the export banana process to try to get their share of the pie.
- ❖ In the global capitalist system, land degradation and its human cost is not a concern for the major players. But at the micro-level it is real for the farmers.
- ❖ The small farmer (an almost invisible entity in the context of the global system in which he participates), whose farm is usually 5 acres or less, cultivates banana or coffee, clears forests and “clean weeds” the hillsides to facilitate the monocropping (which is recommended by the banana importers).

# Rural Communities-Socio Economic- Challenges

- ❖ The farmers cannot mechanize because of the hillside, so they **pay hired labor to prepare the land and devote more time to land preparation than large farmers and their Latin American counterparts**
- ❖ Once a farmer grows banana for the export market, generally he is forced to use **chemical fertilizers, pesticides and weedicides** in order to compete in the global markets
- ❖ Small farmers in the Caribbean have these and many other factors hindering them from achieving the **economies of scale of the large scale-producers in Central and South America**

# Comparison of Production Costs of Banana for Selected Countries

## Comparison of costs of production 1997



# **Rural Communities-Socio Economic- Challenges**

- ❖ **Field observations reveal that there are a number of adverse social effects from current hillside production systems.**
- ❖ **For example, the use of agro-chemicals contaminate common property resources like watercourses that are used for domestic purposes and drinking water.**

# Rural Communities-Socio Economic- Challenges

- ❖ Farmers use **chemical-coated polythene** bags on the fruits until reaping time for protection against scratches from insects and birds as well as to maintain export standards
- ❖ The **polythene bags are non-biodegradable and are usually left in the field. It is not unusual for these bags to end up in watercourses, thus distressing aquatic organisms**

# Rural Communities-Socio Economic- Challenges

- ❖ Farmers systematically **de-leaf plants**, and observe other rigid maintenance procedures
- ❖ So, the “export banana” small farmer wakes up everyday contemplating how to get the perfect fruit in order to meet export standards
- ❖ He walks many miles on rugged terrain to the field. He transports the fruit rapidly but in such a way as to avoid even the slightest speck of damage. He transports farm inputs and harvested crops by carrying them on his head, with the help of a donkey, or by using an indigenous contraption called a handcart.

# Rural Communities-Socio Economic- Challenges

- ❖ In addition to fertilizers and pesticides, the farmer must also purchase special cartons and packaging materials for shipping
- ❖ He bears all these risks, yet his effort often times may not pay off because every year hundreds of pounds of bananas prepared for export are rejected at the boxing plants, and never leave the shores of Jamaica



# Rural Communities-Socio Economic- Challenges

- ❖ Rural space is not merely a physical container in which capitalism unfolds, it has social dimensions that are continually being constructed, deconstructed and reconstructed by external forces.
- ❖ Trade liberalization fosters less diversified rural economies.
- ❖ Traditional mix cropping creates a local culture of **exchange of crops** and the security of having assorted vegetable and root crops on the family table, as well as the diffusion of exchange labor among neighbours.
- ❖ These exchanges foster good will, social networks and other intangible social intercourse that meld communities together. For example, under trade liberalization the *“local farmer - higgler – local consumer”* relationship is disrupted and in the new arrangement for those who sell vegetables in the local market place is *“importer - higgler – local consumer.”*
  - ❖ Or, **Informal Commercial Importer - Consumer**
- ❖ It is the small farmers and their families and communities that absorb the bulk of the social and environmental costs associated with export banana production while the large MNCs reap large profits, slowing the development of these communities.

# Rural Community Dislocation

- ❖ Before the spread of global capitalism, rural farmers in Jamaica produced a mix of crops to supply small communities and the wider society.
- ❖ Some farmers have now changed from the more traditional, pre-globalization, environmentally benign, self sustaining mixed cropping systems (polyculture) to monocropping of export crops.
- ❖ **Mixed cropping** is desirable, because it allows diverse nutrition for the family; exchange and sharing of produce within traditional communities, and it also slows land degradation.

# Externalities (Hidden Costs)

- ❖ Any extraction from, or use of, or disruption of the land comes with a cost.
- ❖ Who should pay for the unaccounted costs of land degradation and social disruption?
- ❖ While the environmental problem is in 'someone else's backyard,' it can be rationalized or simply dismissed in terms of its implications either for ecosystem change and degradation or for the human experiences involved.

# Externalities

❖ The price for retail bananas in the overseas market does not reflect the cost of inefficient use of resources nor the;

✓ the loss of biodiversity from the clearing of forests for cultivation,

✓ deforestation

✓ soil erosion

✓ water contamination by agro-chemicals

✦ social and economic dislocation that occur in the small farming communities of the producing countries.

# Externalities

- ❖ **The price of ripe bananas in core countries, for example, in the USA has remained basically stable over the past 10 years, while the small farmers in Jamaica and other peripheral countries have had to pay increasingly more for farm implements, agrochemicals and other farm inputs because of price inflation, not to mention the declining soil fertility and land degradation they must endure.**

# Externalities

- ❖ Trade and environmental protection mechanisms should go hand in hand. NAFTA and WTO have environmental **side agreements**.

# Conclusion and Comments

- ❖ **The current structure of the international banana trade in the world economy is not viable for the long run survival of local rural communities.**
- ❖ **The cheap retail price of ripe banana in the developed world is provided at a cost of socio-economic dislocation and environmental damage in the producing countries.**
- ❖ **For sustainability, prices in the international banana economy should reflect the real costs at the various stages of the production process. Structural changes in the global capitalist system are clearly essential if we are to protect our vulnerable social and natural systems.**

# Conclusion and Comments

- ❖ **With trade liberalization, the small farmer is not an invisible player in the periphery. The small farmer does have a face, and a family, and belongs to a community and indeed a society.**
- ❖ **This is particularly important to observe because world capitalism negatively displaces and interrupts social organization and communities in peripheral countries, affecting rural communities in ways that are not manifested in the core countries.**



# Conclusion and Comments

- ❖ **For community sustainability, prices in the international banana economy should reflect the real costs at the various stages of the production process.**
- ❖ **Structural changes in the global capitalist system are clearly essential if we are to protect vulnerable social and natural systems.**

# Questions and Conclusion

- ❖ **Can national governments improve the outcome by well chosen interventions?**
- ❖ **Is globalization simply “modern colonization?”**
- ❖ **The concept of globalization seeks to conceal economic and political control of the core nations over former colonies under the guise of economic and cultural integration and progress.**
- ❖ **We know that for globalization to work the same variables of the old system are necessary: global division of labor; export orientation and increased spread of the MNCs.**

# Conclusion and Comments

❖ **Rural communities in poor countries should limit their participation in the globalization equation if they cannot have some control over their own long-term eco-development and garner benefits for the families living in these communities**

# Conclusion and Comments

- ❖ **Based on what I have discussed, I suggest that empirical studies that underscore the vulnerability of natural and social systems in rural Jamaica and other developing countries from their participation in the global market are warranted.**
- ❖ **The idea here is not pure endogenous development. Communities can benefit from having trade and other economic relations with the rest of the world, but they should have some level of control over this relationship, exogenous factors should not dominate.**

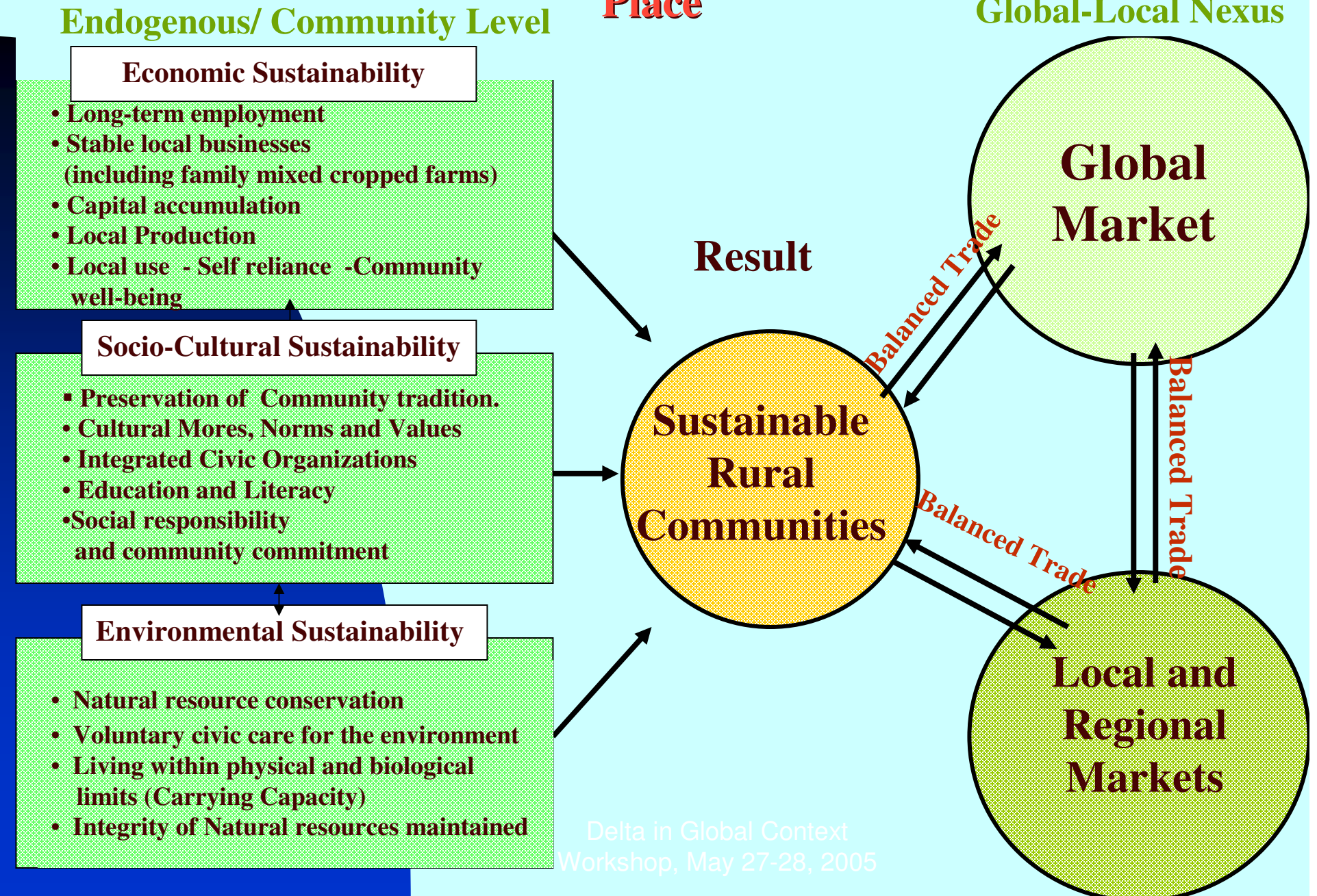
# Conclusion and Comments

- ❖ Globalization must now evolve through **radical and concrete research**, in order to adequately address the ongoing land degradation, as well as the economic, social and cultural dislocations resulting from domination by the post-modern market economies not only in Jamaica, but also the rest of the Caribbean and the developing world.

## Glocalization of Agriculture: An Alternative

- ❖ The *glocalization* of agriculture would see the merging of global opportunities and local interests, giving local communities new avenues to carve out livelihood opportunities and maintain some local socio-economic autonomy.
- ❖ A Model to achieve sustainable rural communities within the context of globalization is proposed:

# Glocalization and Sustainable Communities in the Global Market



# Picture Gallery

Delta in Global Context  
Workshop, May 27-28, 2005

# A Hillside Farming Community





# Hillside Banana and Yam Production



# Small Hillside Farm & Family House



# Yam Production by Small Farmers



# Labor Intensive Yam Production



Delta in Global Context  
Workshop, May 27-28, 2005

# Large Plantations Occupy Flat Lands and are Relatively Mechanized



# The Effects of Excessive Use of Agrochemicals in Banana Production on the Environment

**“Warning Poisoned Water Do not Use!”**





# Small Farmer and Draught Animal in a remote hillside farm



# Labor Intensive: Pepper and Coffee Harvest





# Transportation of Banana for the Domestic Market



# Extreme Care is taken in Harvesting and Transporting bananas for Export



# Change in Packaging Standards

1915 farmer on way to Banana Ship



Expensive Standardized packaging



Delta in Global  
Workshop, May 17, 2000

# International Standards observed in Packaging



# Transporting farm produce by Traditional and Modern methods.



# Jamaican Export Bananas en route to the Port



# Members of the newly-formed Falmouth Handcart Association line up for business



# Young Mix Crop Farmers in a remote community in Jamaica- Can they compete in a global market place?





# Community Folks Selling Mixed Crops in the Local Marketplace



**Several farmers who were unable to sell their large heaps of cabbage the Coronation market, attributed the poor sales to imported vegetables and the economic downturn**



# Rural Jamaican Kids-What's with their future under globalization?



**THANK YOU**

**For Your Attention**

Delta in Global Context  
Workshop, May 27-28, 2005