

Energy in National Decentralization Policies

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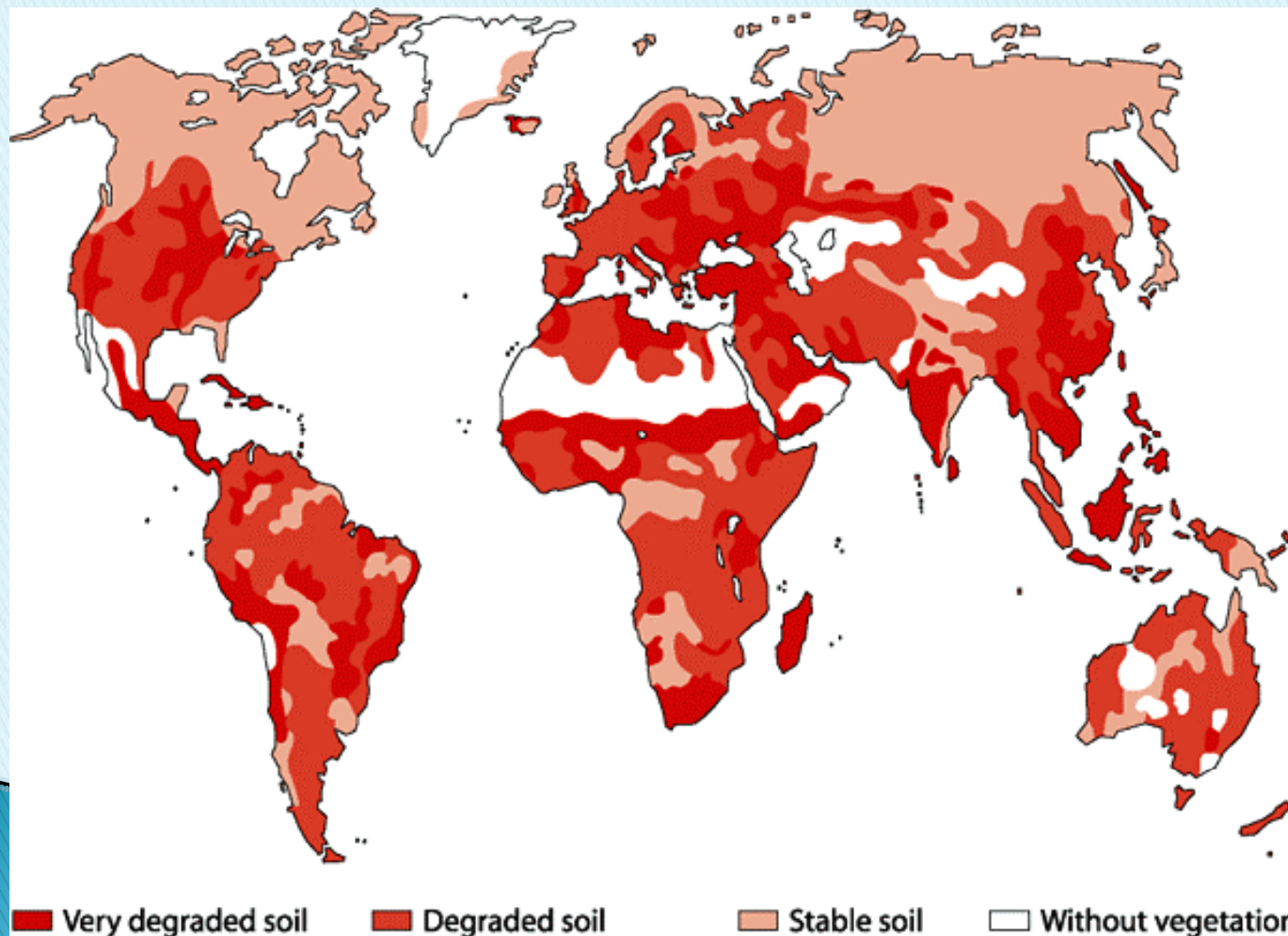
Background

- ▶ Energy is central for sustainable development and poverty reduction. During CSD14, Governments reiterated the need to expand access to reliable, affordable and environmentally sound energy services for estimated 1.6 billion people around the world.
- ▶ Whereas some progress has been achieved in providing access to modern energy services in the Asian region, development in Africa is still lagging far behind in many ways.

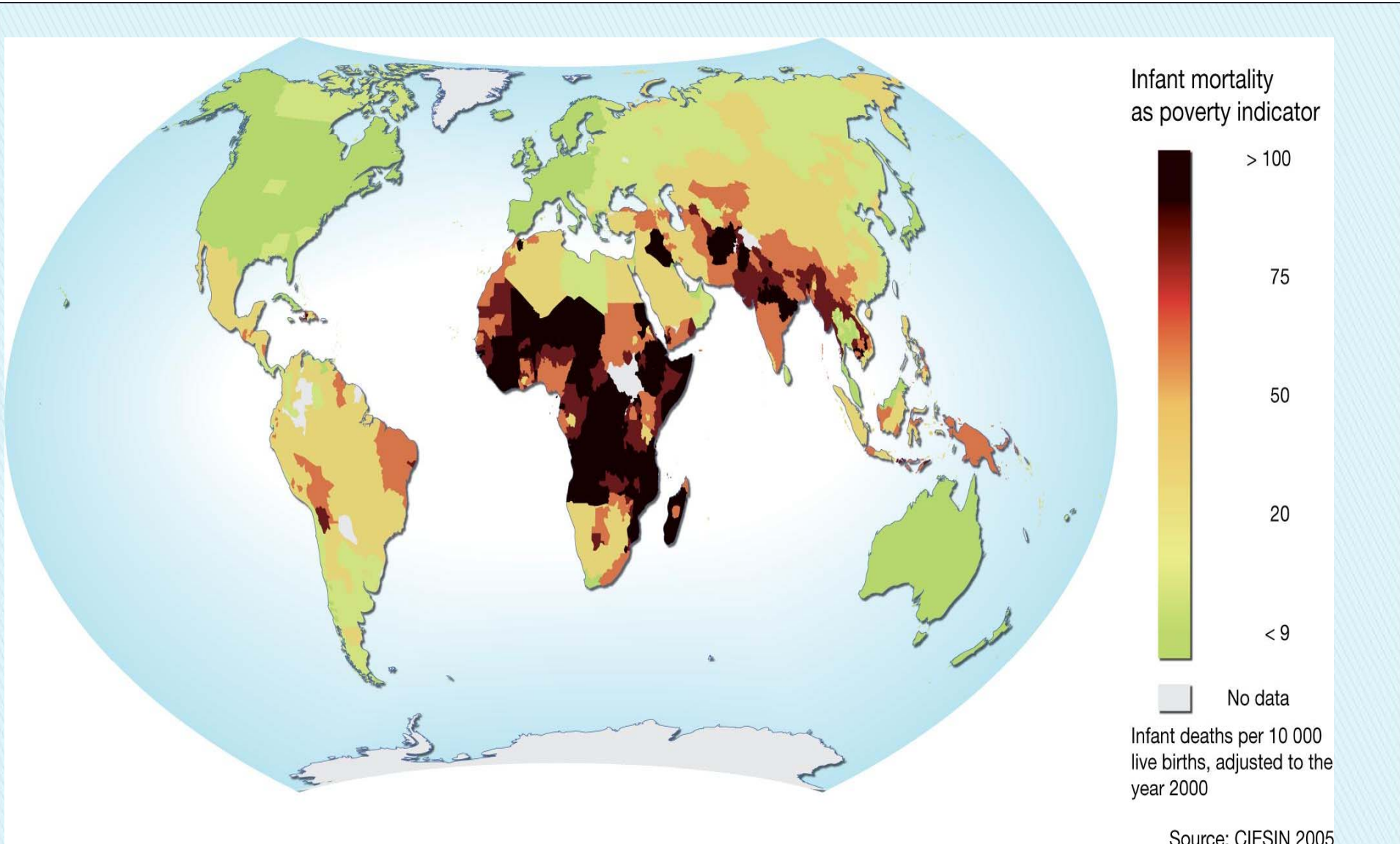
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- ▶ The situation is particularly precarious in sub-Saharan Africa where a mere 70 gigawatt installed capacity of electric power is available for a population of roughly 725 million. More than 500 million people in sub-Saharan Africa do not have electricity in their homes and rely on the unsustainable forms of solid biomass (fire wood, agricultural residues, animal wastes, etc.) to meet basic energy needs for cooking, heating, and lighting. Most schools and clinics do not have electric light and businesses often suffer power interruptions.

Distribution of degraded land in the different continents (Source UNEP)



- ▶ In recent years several developing countries have gained positive experiences with the decentralized and small-scale production and use of fuel crops. As has been shown by a number of projects and organizations, the production and use of liquid biofuels from local feedstock can make a positive contribution to improving access to sustainable and affordable energy.



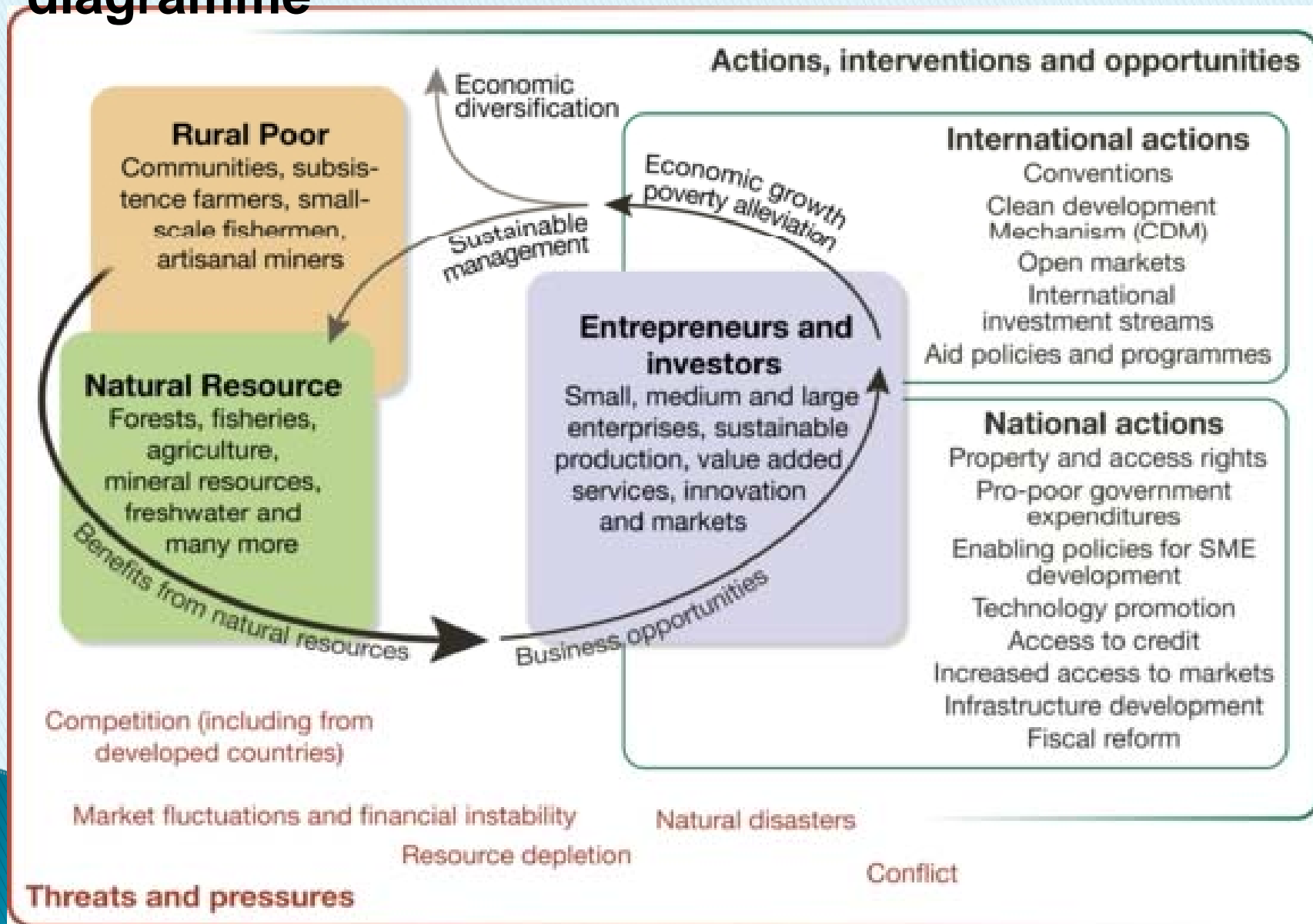
World poverty distribution. Three-quarters of all poor people still live in rural areas. They are heavily reliant on natural resources for their livelihoods: soil, water, forests and fisheries underpin commercial and subsistence activities and often provide a safety net to the poor in times of crises. These natural resources which are abundant in many developing countries - represent an important asset and potential wealth for poor people and their communities. As many of these natural resources are renewable and if properly managed this wealth is long term.

Sources

Center for International Earth Science Information Network (CIESIN), Columbia University. 2005. Global subnational infant mortality rates. Available at: http://www.ciesin.columbia.edu/povmap/ds_global.html (Accessed April 28, 2008)

Improved natural resource management can support long-term economic growth, from which poor people, in rural areas and elsewhere, can benefit to achieve and sustain social progress and development. The map is a part of a set, presenting different natural resources, with a focus on developing countries, and the use of natural resources for economic growth and poverty alleviation

Natural resources path to poverty reduction – diagramme



The rural poor of the World, and the poor countries that they live in, do not have much in monetary wealth - but natural resources represents a possible source of income. With the right support, on both the national level as well as from the international community, the economical growth generated from these resources can alleviate poverty sustainably.

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Focus

- ▶ This presentation focuses on the impact of biofuels for small-scale development and use by households, farmers, communities, etc. Its emphasis is on the sustainable development of biofuels to increase modern energy access to these stakeholders and thereby improve their lives and livelihoods. It focuses on the initial experiences and the further development potentials and needs in sub-Saharan Africa. It is not focused on the broader issues of biofuels for large scale industrial and agro-industry development

Access to Energy for Sustainable Development

- ▶ Eradicating poverty and hunger and providing energy is crucial for sustainable development and for the achievement of the Millennium Development Goals. Without access to modern energy poor in the developing countries are deprived of many potential income generating opportunities. There are an estimated 1.6 billion people lacking access to modern energy services.

- ▶ This situation entrenches poverty and causes increased unsustainable use of traditional solid biomass (wood, charcoal, agricultural residues and animal waste), in particular for cooking and heating.
- ▶ The International Energy Agency (IEA) forecasts that the use of traditional energy sources will decrease in many countries,² but it is likely to increase in South Asia and sub-Saharan Africa, together with population growth.

- ▶ Modern forms of energy such as electricity and petroleum-based fuels account for only a fraction of energy use of poor rural communities.
- ▶ The expansion of the electricity grid is costly and often not affordable for poor communities, particularly those in sub-Saharan Africa.

- ▶ Electricity from renewable energy sources such as small hydro, solar and wind energy systems also has high capital costs.
- ▶ Therefore, in some of the least developed countries (LDCs) of Africa, traditional biomass currently accounts for 70 to 90 percent of primary energy supply.

Bioenergy

- ▶ Bioenergy includes solid, liquid, or gaseous fuels, as well as electric power or chemical products derived from organic matter, whether directly from plants or indirectly from plant-derived industrial, commercial or urban wastes, or agricultural or forestry residues
- ▶ Concentration will now lean on Liquid bio – fuels

Current decentralization policies

- ▶ Decentralization can significantly improve and even shape efforts to expand access to modern energy services, particularly for poor rural women and men.
- ▶ Currently in many developing countries, service delivery and infrastructure planning are being decentralized to the sub national level.

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- ▶ decentralization provides a Platform for local actors to engage in planning and implementation in their own localities and to enhance their capacity for expanding energy service delivery in rural areas.
- ▶ Policies and programmes are needed to encourage the integration of energy into development programmes and processes at the sub-national level. But there is very little information on global trends showing how energy is treated in relation to national decentralization policies and programmes.

- ▶ To take full advantage of decentralization opportunities, efforts Africa needs to integrate energy issues into local development planning and processes promoted under decentralization schemes
- ▶ Linkages between energy and decentralization are rarely discussed in the national decentralization policy documents reviewed, suggesting a gap in these countries' approaches.

Sustainability Issues Related to Biofuels Production and Use

- ▶ *Economic and social development*
- ▶ *Gender and health*
- ▶ *Climate change mitigation*
- ▶ *Food security and energy*
- ▶ *Biodiversity, water, soil and forestry*
- ▶ *Bio-fuel fair-trade*

Africa has had Project experiences with sugar cane (Ethanol)



Case studies of Successful African sugar cane bio-ethanol feedstock

- ▶ Malawi
- ▶ South Africa
- ▶ Mauritius
- ▶ Zambia
- ▶ South Sudan
- ▶ Kenya
- ▶ Swaziland

Biodiesel/Biofuel in Palm Oil and Jatropha cultivation and processing



African bio diesel feedstock

- ▶ Ghana-jatropha
- ▶ Mali-jatropha
- ▶ Tanzania-jatropha
- ▶ Uganda-Palm oil

- ▶ Most still in infancy stages.

Barriers to Biofuels Development in Sub-Saharan Africa

- ▶ Feedstock awareness.
- ▶ Land ownership.
- ▶ Policy support.
- ▶ Affordable financing.
- ▶ Institutional capacity and awareness.
- ▶ Local technology production.
- ▶ Market development.

Suggested activities for future scaling up include

- ▶ *Inventory of Existing Resources, Technologies, and Capacity for Small-Scale Bio fuels Development in Sub-Saharan Africa*
- ▶ *Technology R&D.*
- ▶ *Improve Policy and Regulatory Frameworks.*
- ▶ *Assessment of Local Needs, Development Potential and Constraints*

- ▶ *Financing Facilitation.*
- ▶ *Agricultural Extension Services and Capacity Building/Capacity Strengthening*
- ▶ *Market Development.*
- ▶ *International Cooperation.*
- ▶ *Setting Indicators*
- ▶ *Bottom-up Approach in social development*

Locally constructed LPG stoves and biogas in Kenya. Expanding access to clean cooking fuel Addressing IAP



Thank You