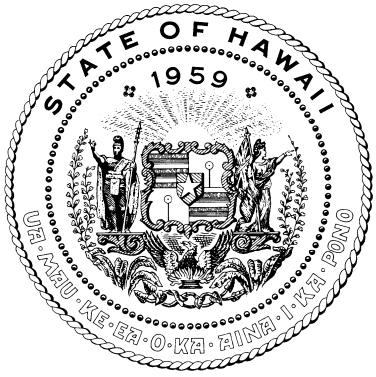
FINAL REPORT TO THE TWENTY-FOURTH LEGISLATURE

REGULAR SESSION OF 2008

REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO CONDUCT AN ANALYSIS OF INCENTIVES TO PROMOTE LANDOWNER PROTECTION OF IMPORTANT MAUKA LANDS



Prepared by

THE STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
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In response to House Concurrent Resolution 200, House Draft 1, Regular Session of 2006
State of Hawaii

Honolulu, Hawaii
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REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO CONDUCT AN ANALYSIS OF INCENTIVES TO PROMOTE LANDOWNER PROTECTION OF IMPORTANT MAUKA LANDS

PURPOSE

This final report complies with House Concurrent Resolution 200, House Draft 1 (HCR 200) of the 2006 Regular Session, which acknowledges the importance, in Hawai‘i and throughout the World, of protecting and preserving natural resources that in turn provide ecosystem services to the communities surrounding them. Through this concurrent resolution, the Department of Land and Natural Resources (DLNR) was directed to "conduct an analysis of local, national, and international incentive programs that promote landowner protection of important mauka lands and recognize the public benefits of the ecosystem services provided by those lands." Furthermore DLNR was asked to generate ideas and recommendations, in consultation with relevant parties, to support effective stewardship of Hawaii's diverse mauka lands, including intact forest, open woodlands, and pasture lands.

DLNR organized a project steering committee to aid in research, organization, and discussion related to this resolution. This Committee is committed to continuing to work on recommendations found in this report and suggest that this needed effort be continue and named the BEST Project - Benefits from Ecosystem Services Tomorrow.

EXECUTIVE SUMMARY

Over half of the lands in Hawai‘i are privately owned and *mauka* lands, including intact forests, open woodlands, and pasture lands, and provide a significant amount of "ecosystem services," that support all of Hawaii's residents and visitors. These services include the delivery of clean drinking water, carbon sequestration that stabilizes the climate, components and plans for cultural practices, opportunities for recreation, and many others. These lands also play a critical role in supporting Hawaii's unique native plants and animals. Therefore, it is essential to provide solid stewardship incentives for private landowners, especially for *mauka* lands that are critical in ecosystem service production.

While *mauka* lands provide life-supporting services of immense economic and cultural value, these services are often insufficiently monitored and undervalued in land use decisions. The responsibilities and costs associated with the production of ecosystem services fall largely upon mauka landowners, despite the broad benefits that accrue to the public. With over half of the land in Hawai‘i privately owned, there is a critical need to provide an array of incentives that meet the diverse situations of landowners to ensure a secure supply of ecosystem services for current and future generations.

The overall goal of this final report is to catalyze a major shift in the way we value natural capital and the ecosystem services it provides. The report is meant to implement a change in the way we look at the environment; not solely as a "free good" but rather promoting the understanding that by nurturing ecosystems, we are ultimately providing long-term benefits for everyone. The question is how will we accomplish this vast vision in the State of Hawai'i?

Included in this report are a number of specific recommendations for enhancing mauka landowner interest in land use practices that protect and promote ecosystem services. The body of the report contains recommendations for both state and county government as well as numerous supporting documents to provide greater detail to the context of the work.

The HCR 200 Project Steering Committee recommends the following key initiatives to promote private landowner support for conservation actions and to establish incentives for landowner action.

- Expand the use and effectiveness of landowner assistance programs by continuing state funded programs, and working closely with federal counterparts to ensure programs work well together. Key actions include removal and reduction of disincentives to participation, increasing landowner access to information, and providing favorable cost share or other financial support.

- Establish state tax credits for donated conservation easements and landowner-funded activities that promote conservation on private lands. The combination of existing federal tax benefits and proposed state tax credits will stimulate expanded conservation on mauka lands.

- Expand Use of Real Property Tax Incentives. Programs are needed to remove barriers for landowners by reducing the financial burden of holding land with high economic potential for development, while simultaneously providing public benefits in its current use. Counties are encouraged to develop preferential property tax programs that provide landowners with tax incentives for preserving agricultural, ranching, forest, and conservation lands

- Fund pilot projects to quantify and value ecosystem services provided by mauka lands. This will require embracing new technologies, expanding research, and implementing on-the-ground projects to demonstrate costs and benefits of societal investment in ecosystem services.

- Establish an array of market-based funding mechanisms for ecosystem services, including launching a Hawai'i Fund for Conservation to link buyers and sellers of ecosystem services.

- Dedicate a position to coordinate efforts among government agencies, stakeholders and experts to implement multiple new ecosystem service projects.

A dedicated position for these efforts can also facilitate interaction among other important initiatives such as biofuels and green house gas emission reductions.

- Continue a planning and advisory committee to develop and promote ecosystem services in the State of Hawai‘i under the auspices of the BEST Project – Benefits from Ecosystem Services Tomorrow.

By acting upon these recommendations, we can take necessary steps towards valuing and protecting Hawaii's ecosystem services for current and future generations.

Attached to this report are numerous supporting documents expanding upon all the recommendations, ideas, and discussion points presented in this report. Each topic is meant to encourage the continuation of this worthy effort and the vision from which it was created.

INTRODUCTION

Relative to other forms of capital, assets embodied in nature are poorly understood, scarcely monitored, and undergoing rapid degradation, in Hawai‘i and throughout the World. Often the importance of the benefits provided by ecosystems ("ecosystem services") is recognized only upon their loss, such as in the aftermath of disastrous flooding or depletion of sources for clean drinking water. As a result, ecosystem services are typically undervalued, if indeed considered at all. Yet, these services are integral to Hawaii's economy and underpin the well-being of its citizens and visitors.

In Hawai‘i, *mauka* lands including intact forest, open woodlands and pasture lands are important providers of ecosystem services. Vegetation on these lands facilitates the capture and infiltration of fresh water, controls flooding, and helps protect our near-shore reefs from sedimentation. Ecosystem services also include important cultural dimensions, such as components and plans for gathering medicinal and ceremonial plants. Many people regularly use mauka lands for recreation and subsistence harvest of feral game. These same lands are integral to conservation efforts for Hawaii's native plants and animals, including many threatened and endangered species.

The benefits of ecosystem services from mauka lands accrue to the public at large, yet the responsibilities and costs of providing these services fall largely upon landowners. While these services have immense economic and cultural values, landowners generally do not receive any compensation for their protection. This distortion between conservation and economic incentives creates challenges for landowners who need to generate income from their land to support their livelihoods and other fiduciary responsibilities. Notably, the challenges facing landowners wanting to hold onto their land and manage it with good stewardship continue to escalate – increasing development pressure, rising land management costs, and many other factors.

A new path forward is needed in which we develop the technical, financial, and institutional infrastructures to appropriately value and integrate ecosystem services into land management and policy decisions. We must directly address the diverse challenges facing landowners who need to balance conservation and economic objectives in land management. We can do so by creating flexible and effective incentives that reward landowners for providing life-supporting and life-fulfilling services to the public. In short, ***we need to make conservation economically attractive and mainstream*.**

The challenges to realizing this vision in Hawai‘i are substantial, as they are throughout the World. The recommendations detailed in this report provide a coordinated vision for creating a new economy of nature to support Hawaii's landowners, communities, and environment. Because of the small scale of Hawaii's "economy of nature," government support will likely be necessary to develop and establish a functioning "new economy" envisioned in this report.

THE HCR 200 PROJECT STEERING COMMITTEE

In August 2006 the Hawai‘i State Legislature adopted HCR 200, which directed DLNR to analyze incentive programs that promote landowner protection of mauka lands and ensure the provision of ecosystem services. The concurrent resolution further directed DLNR to consult with mauka landowners, other stakeholders and persons with relevant scientific and economic expertise.

In response to this directive, DLNR organized a project steering committee including members from DLNR's Division of Forestry and Wildlife (DOFAW), large and small private landowners, the Nature Conservancy, Stanford University, Carnegie Institute Department of Global Ecology, and consultation from local law practitioners and other knowledgeable professionals (**Exhibit A – HCR 200 Committee Members**). The composition of this Committee reflects the varied stakeholder interests and linked awareness of the central role of mauka lands in sustaining Hawaii's critical natural capital and unique biological heritage.

In developing the material for this report, it quickly became clear that a coordinated approach was needed to fully develop and implement a program of incentives to mauka landowners and a market to trade ecosystem services. Continuing this effort under the auspices of the BEST Project fills the need to proactively develop new financial and institutional tools to counter the mounting economic, ecological, and social pressures confronting the people managing mauka lands and the capacity of these lands to provide ecosystem services for people.

PROJECT GOALS AND OBJECTIVES

The overarching goal of the HCR 200 Project Steering Committee and the continuing BEST Project is to establish effective, flexible, and widely adopted incentives for mauka

landowners that enhance conservation and sustainable management of mauka lands. This goal can be accomplished through pursuit of several linked objectives including:

- Compensate landowners for production of ecosystem services through direct payments, assistance programs, conservation easements, and other types of incentives.

- Support the integration of conservation and economic production practices on mauka lands, including intact forest, open woodlands, and pasture lands.

- Correct regulatory impediments that inhibit effective conservation by private landowners.

- Promote conservation of biological diversity and rare species by providing incentives and addressing disincentives (e.g. legal action).

- Promote stable tenure of land ownership.

- Encourage cross-property management to address environmental threats, such as fire and invasive species, and to promote watershed protection.

RECOMMENDED STRATEGIES

The Project Steering Committee has considered a wide variety of strategies that collectively lead toward achieving the long-term BEST Project goals and objectives. These strategies draw upon existing programs, as well as innovative and effective policies that have been utilized nationally and internationally. Some recommendations are ready for implementation; while others will require more investigation and testing through small-scale pilot projects, detailed development of methodologies, and/or long term research. Below is a brief summary of each topical area, followed by one or more specific recommendations. More detailed discussion and documentation can be found in the Exhibits section of this report (**Exhibit B - Summary of All HCR 200 Report Recommendations).**

1. Landowner Assistance Programs

There are a myriad of state and federal assistance programs currently available to private landowners in Hawai‘i that support the above stated goals and objectives. Landowners have access to these programs through submission of written proposals, development of management plans, and commitment to cost sharing funds. Each program has its own specific objectives, application processes, and review criteria. A summary of private landowner assistance programs in Hawai‘i can be found in **Exhibit C – Forestry Related Assistance Programs & Incentive Programs for Private Landowners**.

Landowners often express reservations in relation to a variety of disincentives associated with assistance programs. This makes it important to understand both the need for incentives as well as the factors that may discourage the use of some of these programs. Several examples of disincentives include inconsistencies in county zoning designations and tax benefits as well as increased legal liabilities associated with the Federal Endangered Species Act. Other examples related to the confusion and complexities with implementing a federal program while following state procurement rules. For instance, landowners interested in selling a conservation easement on their land must 1) Provide a minimum of a 25% donation, 2) Pay federal capital gains, and 3) Pay state capital gains. Coupled with other difficult steps such as obtaining state appraisals; environmental assessments; conservation district use permits; management plans; and other necessary due diligence - landowners can become dissuaded of engaging in these programs. Reducing some of the difficulties with landowner assistance incentive programs would increase their use and effectiveness.

Recommendation 1a - Where feasible, remove restrictive disincentives associated with assistance programs in order to increase landowner incentive to utilize these programs.

To increase the use of landowner assistance programs, an interactive website or ‘one-stop shop’ with specific information about all landowner assistance programs in Hawai‘i would be an effective tool for private landowners interested in conservation practices on their land. Such a website would be constructed to guide landowners to programs that best meet their ecological and financial needs. This type of website would also be helpful in guiding landowners through some often cumbersome and confusing regulatory steps such as:

- Conservation District Use Permits
- Environmental Assessments and/or Environmental Impact Statements
- Management Plans
- Threatened and endangered species use permits
- County Permits
- State zones and subzones,
- County zoning and property taxes
- Obtaining liability insurance
- Understanding how cost-share funds affect state & federal taxes

Recommendations 1b - Develop an ‘one-stop shop’ interactive website about all landowner assistance programs in Hawai‘i. A website should identify available incentive programs, help to mitigate disincentives, and provide links to useful resources.

DLNR's Natural Area Partnership Program (NAPP) allows private landowners to utilize federal funds as a match for state funding for restoration and conservation practices. DLNR's Forest Stewardship Program (FSP) on the other hand, does not allow for this same use of federal funds as a match despite the fact that both programs benefit from the same funding source (Natural Area Reserve Fund). Additionally, NAPP provides a two to one match while FSP provides a one to one match for cost-share assistance. These inconsistencies lead to confusion and limit incentives for landowners to use FSP.

Recommendation 1c - FSP should be revised to equal the favorable incentives allowed under NAPP to demonstrate the importance of stewardship on all mauka lands.

The Native Forest Dedication Program on the Big Island allows landowners to dedicate their property as native forest, thus receiving reduced property taxes. This program signifies the value of keeping native forests intact, however; few landowners utilize it due to lack of knowledge about the program and/or because of difficulty in using it. This program could be improved to reduce landowner associated problems and workloads on county tax offices by utilizing experts from DOFAW for technical assistance. DOFAW staff actively visit private landowners and have the botanical and technical skills and knowledge needed to assist landowners with the development of management plans in association with the requirements of the dedication program. DOFAW assistance in reviewing plans submitted to county tax offices could help county tax officials make technical decisions and speed up the review and discussion process. This program could also be effective on all of the Main Hawaiian Islands if counties recognize the value of conserving native forests verses the potential loss of property tax revenue (**Exhibit D – Native Forest Dedication Program**).

Recommendation 1d - Improve the structure and deliverability of the Native Forest Dedication Program on the Big Island and support establishing this program throughout the state.

A new program is available and is being developed in Hawai‘i entitled the Conservation Reserve Enhancement Program (CREP). CREP provides private landowner funds to set aside reserves on their agricultural lands for improved water quality and species habitat. Through the program additional funds are available for restoration and conservation practices implemented on those lands. DLNR is currently in negotiation with federal partners to bring this program to Hawai‘i.

Recommendation 1e - Continue providing the state support and matching funds necessary to implement the Conservation Reserve Enhancement Program. (**Exhibit E – Conservation Reserve Enhancement Program**)

2. Conservation Easements

Conservation easements are restrictions placed on land to enhance conservation values. They are either voluntarily sold or donated by a landowner. Conservation easements constitute legally binding agreements between the landowner and a qualified conservation organization that obtain the sold rights in perpetuity. Landowners retain ownership but sell or donate certain rights such as access, grazing and/or development. (**Exhibit F – Overview of Conservation Easements and Related Tax-benefits)**.

Easements represent an enormously valuable conservation tool. The payments or tax benefits received by a landowner promote stable tenure of ownership while enabling

compatible use (e.g. sustainable forestry). At the same time, conservation provisions in the easement help to protect ecosystem services by locking up activities that degrade healthy landscapes.

A new conservation tool here in Hawai‘i is the Legacy Land Conservation Program (LLCP), established by Act 156, Session Laws of Hawaii, and authorized by Section 173A-5, Hawai‘i Revised Statutes. LLCP provides funding for the acquisition of fee title or conservation easements on lands deemed important for:

- Watersheds protection
- Parks
- Coastal areas, beaches, and ocean access
- Natural areas
- Habitat protection
- Agricultural production
- Cultural and historical sites
- Open spaces and scenic resources
- Recreational and public hunting area

Landowners are recognizing that they may also derive substantial tax-related benefits from the sale of or donation of conservation easements. Currently, landowners can recoup up to 34 percent of the value of donated development rights from federal charitable deductions that lower their taxable income. There are 12 states throughout the United States that provide an additional state tax credit for conservation easement donations. These conservation credits can provide greater and more direct financial benefits to landowners than those provided by federal tax deductions, as they involve dollar-for-dollar write-offs of state income taxes. For landowners with little taxable income in a particular year, the state tax credits may be applied to reduce taxes over a designated number of years.

Currently, landowners in Hawai‘i entering into a conservation easement are only eligible for federal tax benefits. Recognizing the important role of easements in advancing conservation of important lands in Hawai‘i, the Project Steering Committee developed model legislation for state tax credits for conservation easements and conservation land management investments that would complement the existing federal benefits to encourage broader use of easements. The Project Steering Committee feels both conservation easements and landowner investment in land management that leads to sustainable conservation are both worthy of a state tax credit because both actions have similar outcomes and require significant investment on the landowners part. The amount of the tax credit will be commensurate with the total value of the conservation easement and/or land management investment the landowner provides. (**Exhibit G – Model Conservation Tax Credit for State of Hawai‘i**).

Recommendation 2b - Develop and enact a conservation tax credit in State of Hawai‘i.

Recommendation 2a - Actively promote the use of conservation easements with the State or local non-profits**,** and ensure that landowner property taxes are reduced as a result of the sale of some ownership rights on their lands.

3. Real Property Taxes

Real property taxes assess property values at the fair market assessment of its "highest and best use." In areas experiencing growth or other forms of development pressure, landowners face rising property taxes as the property's value for development increases above the property's value in its current use (e.g., agriculture, conservation). To pay for rising taxes, landowners may be forced to sell or develop part of their land – a situation that creates a disincentive for maintaining stable land tenure and land uses consistent with maximizing ecosystem service production.

Increasingly, counties and states are developing preferential property tax programs that provide landowners with tax incentives for preserving agricultural, ranching, forest, and conservation lands (**Exhibit H – Real Property Tax Incentives**). These programs remove barriers for landowners by reducing the financial burden of holding land with high economic potential for development, while simultaneously providing public benefits in its current use. Currently, programs exist in Honolulu City & County, Kaua'i County, Maui County, and Hawai'i County, but adoption by landowners has been limited and needs to be expanded.

In examining potential changes to property tax valuation protocols, lowering tax rates for target land uses must be balanced with the need to continue raising sufficient revenue needed to support public programs. Integral to creating incentives for ecosystem services production is recognizing that individual landowners who manage lands sustainably are providing broad public benefits and therefore contributing to the production of clean drinking water, flood mitigation, climate stabilization, biodiversity habitat, cultural activities, and recreational opportunities.

Recommendation 3 – Counties should consider adopting a modified property tax valuation that rewards landowners for maintaining land uses that provide ecosystem services to the public.

4. Quantifying and Mapping Ecosystem Services

Ensuring a sufficient and secure supply of ecosystem services to support Hawaii's communities and unique native species requires building the scientific, technical, and institutional capacities to monitor ecosystem service production at diverse scales from small parcels to island-wide. Establishing market or value for ecosystem services requires a system to standardize units of value and verify their production and ownership.

Methods for quantifying and spatially mapping biodiversity and ecosystem services are in this early stage and evolving rapidly, including two state-of-the-art research collaborations in Hawai'i. The first collaboration is the Natural Capital Project, a new partnership between Stanford University, the Nature Conservancy (including participants on the BEST Project Committee), and World Wildlife Fund (**Exhibit I – The Natural Capital Project**). This project is developing a software tool to map biodiversity and the

delivery, distribution, and economic value of ecosystem services. The tool's name is the "Integrated Valuation of Ecosystem Services and Tradeoffs" or InVEST (**Exhibit J – InVEST Software Tool**). InVEST is being tested with stakeholders in Hawai'i, as well as other demonstration sites in China, Tanzania, California, and elsewhere. Once operational, InVEST will allow Hawai'i land managers and policy makers to integrate biodiversity and ecosystem services into strategic land planning efforts.

A second collaboration involves researchers from the Carnegie Institute's Department of Global Ecology, the United States Department of Agriculture Forest Service Institute of Pacific Island Forestry, and DLNR (including participants on the BEST Project Committee). This project is testing state-of-the-art hyperspectral LIDAR technology to regularly monitor ecosystem services across Hawai'i at high spatial and temporal resolutions. Efforts are already underway mapping the recently established Tropical Forest Experimental Research Stations on Hawai'i Island, with intentions to extrapolate beyond these sites in the future. **Exhibit K - Mapping the Flow of Ecosystem Services in Hawai'i: An Integrated Approach** is a research proposal describing this work in greater detail.

Quantifying, valuing and establishing a subsidy or market for ecosystem services is still in its infancy. A critical step in creating a market is establishing a monitoring program for biodiversity and ecosystem services that is scientifically credible, transparent, and accessible to the public. A monitoring system is needed in Hawaii that will provide detailed information on habitat for biodiversity, hydrological flows, rates of carbon sequestration, the movement of threats like invasive species, and much more as the system evolves and gets more complex. At this point, adequate baseline information is lacking to effectively value ecosystem services and establish compensation processes. The technology appears to be available to do so if employed.

Recommendation 4 - Support the development of new methods for regularly monitoring biodiversity and ecosystem services in Hawai'i that have consistent and timely information about trends and changes in the landscape that natural resource managers and policy makers need in order to make effective decisions.

5. Payments for Ecosystem Services – Possible Pilot Projects for Hawai'i

Payments for Ecosystem Services (PES) are a new market-based tool for conservation where landowners are compensated for providing services that have immense economic value and benefit the public, but which historically have been provided for free. PES programs have been launched in diverse biophysical, economic, cultural, and political contexts ranging from Costa Rica to Tanzania to the United States and beyond. Programs target a wide range of markets for services such as carbon sequestration, water, and biodiversity, all of which are relevant to and have significant potential to be launched in Hawai'i (**Exhibit L – Market-based Incentives Overview)** that have emerged for carbon sequestration, water, and biodiversity all of which are relevant to and have significant potential to be launched in Hawai'i.

PES programs operate by linking buyers of ecosystem services (e.g. a company offsetting its carbon dioxide emissions) with sellers of ecosystem services (e.g. landowners restoring and maintaining forest cover that sequesters carbon dioxide emissions). To launch PES programs in Hawai‘i, the needs of both buyers and sellers of ecosystem services must be addressed in step. Developing the capacity to monitor ecosystem services (as described above in Recommendation 4) is essential for supporting credible and transparent PES programs for all involved parties.

Successful PES programs have generally started with small pilot projects that can test and refine an institutional model that can be scaled up and adopted by a wider set of participants at a later stage. To catalyze opportunities for landowners who would act as sellers of ecosystem services, there is a critical need to develop business models that make conservation economically attractive. **Exhibit M – Landowner Ecosystem Services Pilot Projects** describes the Project Steering Committee's suggestion for working with a small set of private landowners to develop these opportunities. Integral to this vision is creating new revenue streams linked with conservation activities, including PES programs and other ideas described in this report.

One key in launching an ecosystem services program is to establish a bank to hold and from which to make payments. Funding for ecosystem service payments could draw upon diverse sources, including investment from the private sector through voluntary and regulatory markets. **Exhibit N – Hawai‘i Fund for Conservation** describes the Project Steering Committee's suggestion for a "Hawai‘i Fund for Conservation", which would serve as a clearinghouse to facilitate transactions between buyers and sellers. Such a fund would build upon innovative and successful models from around the World, including the PES Program in Costa Rica and the Water Fund (Fondo del Agua) in Quito, Ecuador.

Recommendation 5a - Launch landowner demonstration projects that focus on selling ecosystem services and developing business strategies to make conservation economically attractive (**Exhibit M – Landowner Ecosystem Services Pilot Projects**).

Recommendation 5b - Explore diversified funding sources to pay for ecosystem services, including launching a Hawai‘i Fund for Conservation (**Exhibit N – Hawai‘i Fund for Conservation**).

6. Other Market-based Funding Mechanisms

Advancing ecosystem service efforts in Hawai‘i will require creating a suite of new incentives that meet the diverse needs of landowners including the need to balance conservation and economic objectives, while complementing existing programs. In addition to the incentives described above, the Project Steering Committee identified these additional tools that could be effective in Hawai‘i and which would benefit from further exploration.

Conservation Development: An alternative form of development that allows for the protection of biodiversity and ecosystem services while meeting local housing needs and providing a profit to developers (**Exhibit O – Conservation Development**). Through this approach, developers are allowed to build at a higher density than otherwise permitted by local zoning by clustering development in one part of a parcel, while devoting the rest of the parcel to conservation management. Importantly, conservation development could provide a much needed revenue generating alternative for landowners to continue good land stewardship but who face fiduciary challenges that push them towards selling their land.

Transferable Development Rights: This tool uses a regulatory approach to establish a market in which land development rights can be traded to guide where future development occurs and to ensure that sensitive conservation areas are not developed (**Exhibit L – Market-based Incentives Overview**). Developers seeking to build in a zone where development is allowed must purchase development rights from landowners in a zone where development is not allowed. As such, these landowners are financially compensated for retiring their development rights, while development and conservation goals are also advanced. This tool has been launched in various counties across the nation, which would provide an excellent starting place to evaluate the potential for Hawai‘i.

Recommendation 6a – Further explore tasks of conservation development and transferable development rights that could protect Hawaii's environment while providing needed income to landowners and allowing appropriately designed commercial and residential development.

Certification, Eco-labeling, and Niche Markets: Various products from sustainably harvested wood to shade-grown coffee are examples of certification and eco-labeling programs that aim to expand conservation land management by increasing demand from consumers seeking to reward good land stewardship. Recently, Kamehameha Schools (including participants on the Project Steering Committee) worked with the Forest Stewardship Council to obtain the first certified sustainably managed forest in Hawai‘i. Certified and eco-labeled products could be developed for multiple forestry and agricultural products, aiming to capture increased value for landowners through higher consumer willingness-to-pay for certified products. Niche product markets could also be pursued that attract consumers with strong ties to Hawai‘i and environmental stewardship. Indeed, some initiatives related to woodcrafts and agricultural crops are already being pursued.

Ecotourism: Tourism is a major driver of Hawaii's economy, and the mauka lands provide opportunities for tourists to experience Hawaii's unique and varied natural systems and agricultural lands. Developing ecotourism models for mauka lands could create a new revenue stream that rewards landowners for good stewardship of their land.

Conservation Banking: This tool is a market-based incentive that allows an entity impacting endangered species to offset its impacts at another site where species are conserved (**Exhibit L – Market-based Incentives Overview**). Importantly, conservation banks change endangered species from a liability to a benefit for landowners, since managing for endangered species could now provide financial return. Conservation banks have been established in several states across the United States. This approach may provide a new tool to aid the recovery of some of Hawaii's endangered species, which remains a pressing conservation priority in the state.

Recommendation 6b - Support continuing research into these and other tools with potential to create effective ecosystem service incentives for mauka landowners.

7. Related Policy Initiatives. Throughout Hawai'i, there are multiple efforts and policy discussions evaluating how to best move towards a sustainable future. The Project Steering Committee has focused on developing pathways ensuring the continued and secure provision of ecosystem services from mauka lands. Our efforts will be most effective when connected with related taskforces and policy discussions, both now and in the future. Because this is such a new and important initiative, a planning and advisory body is needed to continue to develop and promote ecosystem services in Hawai'i. DLNR should continue to work with such a steering committee.

There are a number of important closely related issues that are not addressed in this report such as the production of biofuels, biomass, and reduction in green house gas emissions (Bill 226). The potential development of landowner incentive programs associated with these issues may be more successful if done in consultation with other similar efforts such as the BEST Project. The Project Steering Committee feels it is essential that incentive programs do not negatively impact each other. For instance, incentive programs developed to support private landowner production of biofuels is likely to occur in the future. While this is very important, provisions should be taken to ensure that biofuel production does not enable the conversion of highly productive areas that are generating multiple ecosystem services into biofuel mono crops that may decrease overall ecosystem productivity and are highly invasive.

Recommendation 7a –DLNR continue working with a planning and advisory committee to develop and promote ecosystem services in the State of Hawai'i. The current effort should continue as the BEST Project Benefits from Ecosystem Services Tomorrow.

Recommendation 7b - Facilitate opportunities for linked dialogue for policy initiatives affecting ecosystem services, including biofuels, greenhouse gas emission reductions, and other related topics.

8. Integration and Education. Federal and state agencies understand the importance of outreach and education but often do not devote the time and funds necessary to achieve it. Many private landowners are capable of restoration and conservation practices on their

lands but are not aware of assistance programs that could help them achieve their goals. More emphasis needs to be placed on engaging the public and educating them about small and large scale environmental issues, as well as more communication about what they can do to help.

Recommendation 8a - Landowner incentive programs need more emphasis on education and advertising in order to reach their full potential and to increase their utilization on mauka lands.

Recommendation 8b - Dedicate a full time position to advance initiatives described in this report, as well as broader ecosystem service protection efforts in Hawai‘i. Duties should include:

- Facilitate dialogue and partnerships between private landowners, state and federal agencies, nonprofit organizations, and other parties.
- Outreach to landowners about the new state tax credit (if enacted).
- Work with landowners to develop pilot demonstration projects that illustrate new business strategies for land management that integrate conservation and economic objectives.
- Advance development of ecosystem services payment programs and funding sources, including linking buyers and sellers through the Hawai‘i Fund for Conservation.
- Work with researchers to advance projects testing new methods and technologies to quantify and monitor ecosystem service production.
- Seek out funds through grant proposals to support all of these recommendations.
- Coordinate efforts with the BEST Steering Committee and other related policy initiatives.
- Build alliances for the development of new legislation.

IMMEDIATE NEXT STEPS

Evident in the body of this report, is a diverse array of viable strategies and recommendations to promote conservation of mauka lands through incentive-based programs. Some recommendations are easily attainable by a fairly simple internal departmental actions (ie: State landowner assistance incentives and programs) or have been already initiated by members or entities associated with the Committee (ie: InVest and Natural Capital Project). Other recommendations need further exploration and research before they will reach their full potential and can be implemented (**Exhibit B- Summary of All HCR 200 Report Recommendations**). Among all of the recommendations provided in this report there are four that the Project Steering Committee would like to see move forward immediately to further the efforts made under this resolution. These recommendations represent action items that will advance the protection and promotion of ecosystem services on mauka lands in the State of Hawai‘i by filling in the gaps in landowner assistance programs and initiating ecosystem services as natural capital. The other recommendations mentioned within this report should

continue to be explored by this Project Steering Committee to provide additional alternatives and pilot projects for state implementation. The priority next steps are to:

1) Expand the outreach of the landowner assistance program offered in the state and to ease the enrollment of landowners into these programs; the Project Steering Committee endorses the development of an 'one-stop shop' interactive website about all landowner assistance programs in Hawai'i (**Recommendation 1b**).

2) Provide state tax credits for donated conservation easements and landowner-funded activities that promote conservation on private lands (**Recommendation 2b**). The Project Steering Committee is confident the combination of existing federal tax benefits and proposed state tax credits will provide an immediate stimulation to expanded conservation actions and promote delivery of ecosystem services on mauka lands.

3) Implement strategies which will enhance measurement and valuation of ecosystem services provided by mauka lands (**Recommendation 4**). This will require embracing new technology, expanded research and pilot projects on the ground.

4) Launching the Hawai'i Fund for Conservation (**Recommendation 5b**). Over the longer term, the success of this initiative will depend upon an array of market-based funding mechanisms and systems. To initiate the exploration and to facilitate this process, a fund needs to be established. This Fund will link buyers and sellers of ecosystem services, standardize conservation credits and lower transaction costs for those who are considering investment in Hawaii's biodiversity and ecosystem services.

With the above in mind, members of the Project Steering Committee strongly endorse the continued collaboration between members and others to facilitate implementation of these and other projects. Through the pathways and incentive identified in this report, we can make important and necessary steps toward better valuing and protecting Hawaii's ecosystem services for current and future generations.

EXHIBITS

Exhibit A – The HCR 200/BEST Project Steering Committee Members
Exhibit B – Summary of All Report Recommendations
Exhibit C – Forestry Related Assistance Programs & Incentive Programs for Private Landowners
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