



STRUCTURAL ENGINEERS ASSOCIATION OF HAWAII
P.O. Box 3348, Honolulu, Hawaii 96801

February 7, 2009

TO: State of Hawaii – Senate
COMMITTEE ON TRANSPORTATION, INTERNATIONAL AND INTERGOVERNMENTAL AFFAIRS
State Capitol, Conference Room 224
c/o Senate SGT.-AT-ARMS OFFICE AT: 586-6659

SUBJECT: **SB1645, Relating to State Building Code**
Hearing Date: Monday, February 9, 2009
TIME: 1:35 p.m.

Honorable Senator J. Kalani English, Chair, Senator Mike Gabbard, Vice Chair, and Members of the Senate Committee on Transportation, International and Intergovernmental Affairs:

The Structural Engineers Association of Hawaii (SEAOH) is the local chapter of the National Council of Structural Engineering Associations (NCSEA), and we have over 200 active members in Hawaii. The members of SEAOH have an historic and ongoing role in the development and implementation of building codes, and Gary Chock SEAOH past President, represents our organization as a member of the State Building Code Council established by Act 82 of the 2007 Legislature (HRS 107 Part II). HRS 107 Part II, State Building Code and Design Standards, provides for a comprehensive building code process based on national standards that involves a council comprised of the principal State agencies, county building officials, and engineers and architects.

We would like to express our opposition to SB1645, Relating to State Building Code, which would require that the State Building Code Council adopt standards and criteria to allow the use of bamboo as an accepted construction material under the state building code:

The reason for our opposition is not due to any bias against bamboo. The International Building Code, recently adopted by the State Building Code Council, already provides for a procedure in Section 104.11 for the technical evaluation and approval of construction materials. The International Code Council also provides an evaluation service whereby proponents of new or alternative construction materials can document the structural properties of any material based on testing. Indeed, we note that a Maui company has gone through the established procedure to gain ICC-Certification for one species of bamboo that is approved for use. It is important to public safety that all construction materials be technically substantiated in accordance with national standards, and it is essential that building code officials maintain the integrity of the technical evaluation process to safeguard public safety.

Thank you very much for an opportunity to express our views. We recommend that this bill be deferred. It is unnecessary. The standards and criteria to allow the use of new and alternative materials already exist in the building code just adopted in 2008 by the council.

Structural Engineers Association of Hawaii

Ian Robertson, Ph.D., P.E. Structural Engineer
SEAOH 2008 President

Gary Chock, P.E. Structural Engineer
SEAOH 2007 President 521-4513



Post Office Box 2018, Honoka'a, HI 9672
www.trueoffsets.com

TO: Senator Kalani English, Chair
Senator Mike Gabbard, Vice-Chair
Committee on Transportation, International &
Intergovernmental Affairs

FROM: Shawn James Leavey (808.989.7612/shawn@trueoffsets.com) Marketing + Gov't Relations

HEARING: Monday, February 9 2009, 1:35pm

SUBJECT: Support with Amendments for SB 1645, Relating to the State Building Council

True Offsets believes forest products such as plyboo, bamboo flooring and construction-grade structural bamboo poles are the wave of the future for Hawai'i. We are a start-up company undertaking reforestation, renewable energy and community redevelopment projects on the Hamakua Coast of the Big Island. We provide voluntary "plant a tree" carbon offsets to companies and individuals wanting to make their operations and lives carbon neutral with net-zero Green House Gas emissions. For every carbon offset we sell, we plant a tropical hardwood tree or clump of commercial timber-grade bamboo on the Big Island. At maturity, the carbon sequestered by our trees and bamboos will be permanently captured when they are harvested and transformed into value-added forest products by our partners at the Haina Hawaiian Hardwoods Mill. When operational, the Old Haina Sugar Cane Mill will have the capability to produce hardwood veneers, plywood and "plyboo" with all waste timber cutoffs feeding a 3mW biomass co-generator. Further, all CO₂ emissions from our co-generator will be pumped into attached aquaculture tanks to grow biofuel-algae.

However, we note to the Committee that the State Building Council already has in place standards and criteria allowing the use of bamboo as an accepted construction material. The main obstacle to the widespread is the high cost of conducting engineering studies and obtaining code approval of timber bamboo under the protocols of the International Code Council, which the State Building Council adheres to. Such tests range up to \$500,000 per species, to date there is only one species "on the books" and there at least one dozen elite commercial species of various sizes and characteristics used in bamboo construction. Also, we note that Professor Ian Robertson of the UH-Manoa School of Engineering and Chairman of the State Board of Engineers, has said it is not practical for the UH engineering lab to become an ICC certified laboratory, though having such a lab in Hawaii would certainly bring down cost of testing.

So to use this bill as a vehicle to promote sustainable tropical architecture in Hawai'i, we ask you to amend it as follows: "§107- Use of bamboo. The council shall investigate and implement standards for a rural bamboo building code in Hawaii which allows for agricultural, temporary and experimental living structures until which time bamboo is engineer-approved and codified in the Western World under the protocols of the International Code Council."

Mahalo.

From: Bobby Grimes [biodynamichawaii@gmail.com]
Sent: Sunday, February 08, 2009 9:24 PM
To: TIATestimony
Subject: Testimony on HB 1645
Attachments: Simon Velez ZERI Pavillion.jpg; Simon Velez ZERI Pav 2.jpg; Simon Velez ZERI Closeup roof under.jpg; Bamboo church hall South America.jpg

Testimony on SB 1645 Monday, Feb 9th at 1:35 pm

Chairperson Senator English, and Members of the Committee

I am writing to encourage you to vote forr approved use of bamboo as a construction material.

Bamboo has many amazing properties, but it's strength to weight ratio is among it's most enduring qualities. We can usr this quality here in Hawaii for many constrution uses. Bamboo has been used very successfully all over the world. Allowing its use here not only makes sense from a construction point of view, it will also support the state's efforts toward self sufficiency. What reason could there possibly be for disallowing a material that is want to grow here? Please see the hgh quality buildings of Oscar Hidalgo, Marceeli Villegas and Simon Velez. I have attached a few pictures to share Bamboo is use in the modern, real world.

Please look at these pictures.

Please do all you can to not only allow bamboo, but rather to inspire the fullest and fastest inclusion of bamboo as an allowed building material in Hawaii!

Mahalo Nui Loa, Bobby Grimes

--

Bobby G.
Farm as School- Food as Medicine
P.O. Box 107
Paauilo, HI
96776
www.picasaweb.google.com/biodynamichawaii

"Biodynamic farmers work is grounded in an evolving understanding of the forces and substances that fashion living nature".









From: lennart lundstrom [lundstrombamboo@hotmail.com]
Sent: Saturday, February 07, 2009 9:11 PM
To: TIATestimony
Subject: Bamboo as a Sustainable Construction Material in Hawai'i
Attachments: Jeorg Stamm Bridge DSC03672.JPG; Jeorg Stamm Bridge GCS_(7).jpg

To: Senator Kalani English, Chair
Senator Mike Gabbard, Vice Chair

Committee on Transportation, International & Intergovernment Affairs

Regarding SB 1645, The Use of Bamboo in Construction in the State of Hawai'i

Aloha

My name is Lennart Lundstrom, I have been a resident of the State and County of Hawai'i for 31 years. I am currently the Hawai'i Chapter Representative for the American Bamboo Society

I have been using bamboo as a construction material in various small projects for many years and as a member of the Bamboo society have had the opportunity to learn from various engineers and architects from all over the world.

I have learned that of the several thousand species of bamboo growing in many different countries there are many that are very suitable for the construction of nearly anything you may imagine. Several species will grow to 100ft. in height and 10 or more inches in diameter. There are bamboos that are solid, without the characteristic hollow center that most people think of as a generic trait of all bamboo. With proper joinery techniques bamboo structures are stonger and much lighter than steel structures.

Because of their light weight bamboo buildings are better able to withstand the force of earthquakes. The destructive force of an earthquake is the result of Mass X Velocity.

Bamboo is a sustainable/renewable resource that once established and properly maintained can produce superior construction material almost indefinitely. Most of us are familiar with the phenomenon of simultaneous flowering and death of bamboos. This is not the case with many Tropical Bamboos, there are species in Southeast Asia and South America that will continue to grow after flowering and even some that flower only rarely and sporadically if at all. A form of one species, *Dendrocalamus asper* 'Betung' grows on nearly every island in the Indonesian Archipeligo and has never been known to produce seed, all plants are deliberately cultivated from cuttings and over time have been carried by humans wherever they have gone. This bamboo grows in a clump (not running) to a height of 100 feet and a diameter of 10 inches. In Coloumbia and Equador *Guadua angustifolia* grows to the same size and has been used extensively by both traditional cultures and modern architects like Simon Velez and Marcello Villegas to build some spectacular buildings. The example I am including as an attatchment is by German Architect Jeorg Stamm. It is 30 meters long, built of *Guadua angustifolia* and I think illustrates both the aesthetic beauty of a structure of this type as well as reminding us that in the event of a major earthquake the bamboo bridge would likely fare better than the concrete one.

Both *Dendrocalamus asper* and *Guadua angustifolia* are currently being grown on Hawai'i, Maui and Kau'ai. Several large plantings are of mature size now and are being harvested for construction poles.

Mahalo -Lennart Lundstrom
Hawai'i Chapter Representative, American Bamboo Society





From: Leimana [lpelton@bamboovillagehawaii.org]
Sent: Friday, February 06, 2009 9:45 PM
To: TIATestimony; shawnjamesleavey@gmail.com
Subject: SB1645 Feb- 9- 09 conference rm 224
Attachments: fedvergiate3.jpg; Ferro-BambooExample.JPG

Please allow me to introduce myself and my qualifications for the purpose of testimony for bill SB1645.

I am R.C. Leimana Pelton. I am president of Bamboo Village Hawaii., Inc a nonprofit whose mission is to promote the eco ethical industry of bamboo utilization, and Eco Terrestrial Concepts, LLC., a bamboo design and build company. I was originally tutored by the world's greatest bamboo architect, Simon Velez of Colombia, SA., in 1996. He taught me all the practical knowledge of utilizing bamboo as a construction material, and his unique system of joinery and design. His master bamboo builders tutored me in construction technique. Since then my focus has been to develop a joinery system for bamboo that requires less training and reduces the labor factor. I have spent the last ten years evolving this joinery system especially designed to make constructing with bamboo easy for someone with some knowledge of the characteristics of bamboo now available in workshops and books. I also planted, on my land on the Big Island, the same bamboo species they grow in Colombia, Guadua Angustifolia, known internationally as a superior timber species, and which is soon to be submitted for ICC testing for inclusion in the Uniform Building Code. In addition I have for 10 years grown many other timber species of bamboo. I also built the first pest treatment plant in Hawaii specifically designed for bamboo by Dr. Walter Leise of Germany. I have taught bamboo construction in Hawaii, continental U.S., and in Europe, co- designed with Simon Velez and taught building professionals how to build what is now the largest bamboo structure in Europe, near Milan, Italy (see attached photo).

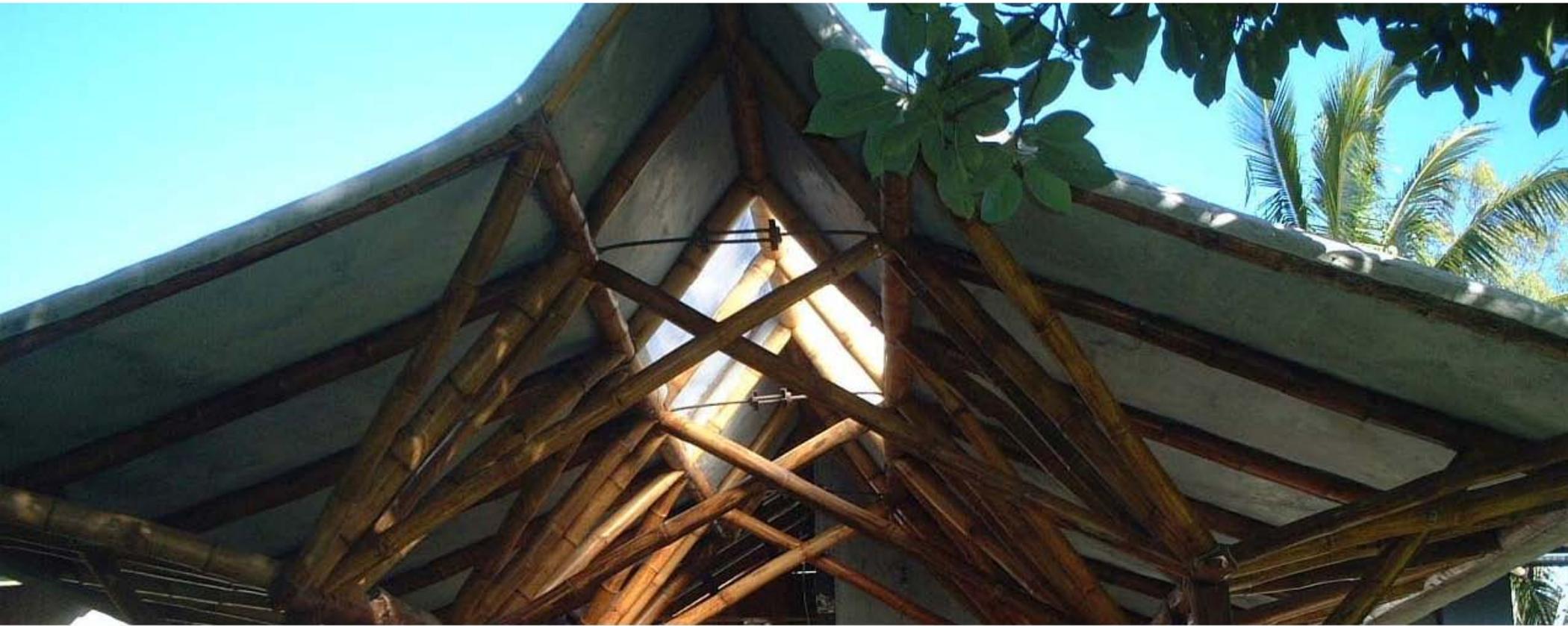
Bamboo is not a fashion but a reality in other parts of the world that is currently transforming from the stigma of only being used by the poor to many thousands of people wanting to live in bamboo homes today. It is being grown in larger quantities here on the Big Island every year. A tissue culture lab has purchased timber bamboo plants from my nursery to clone thousands for industrial farming. The main point is to grow locally in order to build locally. The building commission should step up to the plate and not wait for individuals to cover the expense of qualifying local bamboo species and the grading system to implement utilization. To import bamboo is not that much different than importing tree lumber. Hawaii needs an authorized lab set up for the purpose of establishing Hawaii standards for bamboo and other species of trees that are already here.

I suggest considering beginning with a more practical approach for Hawaii. A local rural building code in Hawaii that would follow a much more lenient set of standards for agricultural, and temporary and even experimental living structures as a starting point until all the infrastructure is in place for urban and city construction. California I believe has in place such a code which could be used as an example. In this scenario practical use of tropical timber species of bamboo and common invasive tree species that are demonstrated to be appropriate for construction could be utilized for more affordable living and farm practices. In support of this concept grants could be made available or other types of financial support to experts of all types of natural building, especially bamboo which grows so well, does not require heavy machinery to harvest, and the tropical varieties are noninvasive. This state of Hawaii needs to be more self sufficient, and the state government should be willing to provide educational opportunities to all to be more sustainable in the future including young people in schools, and possibly disadvantaged folks including the incarcerated.

As you know, in this economy or any other catastrophe, having such a natural resource can lead to a value added product industry that would help us provide income producing products to fill all those empty containers headed back to the continent with something besides our trash. Included as attachments are two examples of bamboo structures I have designed and built.

Respectfully, Leimana Pelton





Creating a Bamboo Culture



www.whisperingwindbamboo.com

To:
The Senate
The twenty-fifth legislature
Regular Session of 2009
Committee on Transportation, international and
intergovernmental affairs

Senator J. Kalani English, Chair
Senator Mike Gabbard, Vice Chair

RE: Strong support for SB1645 "allowing the use of
bamboo as an accepted construction material"

From: Rich von Wellsheim manager of Whispering
Winds Bamboo

Hearing Date: Monday, February 9, 2009

Aloha

Whispering Winds Bamboo has planted 20 acres of timber grade clumping bamboo as part of a larger reforestation project on the east side of Maui. We believe that clumping bamboo can and will contribute to the future of sustainability on the Hawaiian islands. Timber bamboo has been used for construction throughout the world for centuries and even today over 1 billion people live in bamboo houses.

Locally grown timber bamboo can reduce our dependence on imported lumber as it grows well on both our prime agricultural lands and more marginal lands. Bamboo is a crop that is perennial meaning that harvest is sustainable without replanting. Bamboo holds soil in place, helps with recharging the water table, sequesters carbon and produces more biomass and oxygen per acre per year than most other crops and all other timber species.

We strongly believe that Bill SB 1645 is an important step in moving structural timber bamboo into the mainstream of our construction industry. The cost of testing, certifying and conducting engineering studies to obtain code compliance is beyond the ability of a small operation like ours. Having the state step in and help timber bamboo become available to the builder will enable farmers to further diversify their farms and grow bamboo. Bamboo can replace the Wili wili windbreaks with the added advantage of yielding a marketable product that can be harvested every year without destroying the clump.

Bamboo can be made into lots of things from paper to plywood or as the structural component of a truss or simply as a replacement for a 2x4. We believe that the citizens of the Hawaiian islands are interested and dedicated to a more sustainable future for themselves and their children. A future that produces more of our resources locally while creating meaningful jobs and reduces our carbon footprint. We urge the State to be the leader in creating this future.

Mahalo

Rich von Wellsheim

Creating a Bamboo Culture

Whispering Winds Bamboo
HC1 Box 180
Hana, HI 96713

808-248-7561



www.whisperingwindbamboo.com

TO : Senator Kalani English
Senator Mike Gabbard
Committee on Transportation, International and Intergovernmental Affairs

Hearing Date: Monday , February 9, 2009 1:35

SUBJECT: Strong Support for SB 1645, Relating to the State building Council

There is a revolution in green building and sustainable living about to take place across our nation. We feel that Hawaii is uniquely poised to be a leader in that movement. We have all the natural resources to re-define energy supply along with sustainable agriculture and green building.

Bamboo address all of these concerns and is a poster child for smart growth.

Over 1 billion people already live in bamboo houses around the globe

. Bamboo has passed rigorous testing in Germany for it's structural capacities. By simply defining the best species it would be fairly simple to establish a bamboo timber code.

We have a plantation of superior clumping non-invasive quality timber that we have selected from research on building with bamboo. Bamboo has survived earthquakes better than any other structures. I could go on and on touting the benefits of bamboo at every phase of it's transition from planting with a one time tilling of the soil, which eliminates future erosion and stabilizes the watershed, to it's short time needed for maturation to usable high quality timber.

We have had significant interest from the public wanting to build a "grown on Maui" home. The Discovery Channel has been to our farm with their desire to promote bamboo as the "next great green product" however, we have had to warn them that we are in a long and expensive process to get our material passed through the bureaucracy.

By passing SB1645 Hawaii can look forward, not only to being the leaders in the green building movement, we will also create new jobs and many value added industries from bamboo. Please support our independence from mainland imports

Thank you,

Jashana Kippert
Sales manager

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 05, 2009 2:50 PM
To: TIATestimony
Cc: misotov@maui.net
Subject: Testimony for SB1645 on 2/9/2009 1:35:00 PM
Attachments: Support for SB NO 1645.pdf

Testimony for TIA 2/9/2009 1:35:00 PM SB1645

Conference room: 224
Testifier position: support
Testifier will be present: No
Submitted by: MARIA N. ISOTOV-CHANG
Organization: Land & Water Planning and Consulting
Address: 65 Lihikai Place Haiku, Hi, 96708
Phone: 808-575-9763
E-mail: misotov@maui.net
Submitted on: 2/5/2009

Comments:
Bamboo Is Our Future

There is only 5% of the Native Forest's left on Mainland. We need new sources for building materials. Bamboo is that source.

**LAND & WATER
PLANNING AND CONSULTING
MARIA N. ISOTOV-CHANG
65 LIHIWAI PLACE
HAIKU, HAWAII 96708
Ph. & Fax : (808) 575-9763**

January 5, 2009

To Hawaii State Senate Members

Re: SB NO 1645; BAMBOO BUILDING APPROVAL

Thank you for your attention to this matter.

It is with great respect and timeliness that the legislature taking the proactive role in bringing sustainability to the Hawaiian islands thru the consideration of .

In high regard and with deference to Dean Johnston's Masters of Architecture thesis (Univ. of Hawaii, 2002), produced in collaboration with the University of Hawaii College of Engineering and School of Architecture, where by six bamboo species were tested, four from Hawaii and two from Vietnam. In those tests one of the Vietnamese species was Bambusa stenostachya, which is now the first and only structural bamboo recognized nationally by the International Codes Council. With that approval Bamboo Living Homes have designed and built, to code, over 100 hurricane ready homes throughout Hawaii. Locally, Mr. Johnson's testing of the four Hawaiian grown species have tested equal to or stronger than the currently approved species.

It has been proven that we are growing world class structural bamboo. Hawaii is now at the cusp of becoming a certifiable producer and exporter of the first U.S.A grown structural bamboo. Currently, there are at least other Bamboo farmers with timber bamboo that will soon be ready for testing. With other small scale bamboo plantations either being planted, planned or in order for stock from local nurseries.

Many species of bamboo are proven to be stronger than steel, durable with proper non-toxic preservation strategies and ecologically sound furthering our global necessity to steward our environment in a sustainable fashion.

Tropical, clumping, non-invasive bamboo species are ideally suited to Hawaii's climate and volcanic origin.

- They are drought resistant requiring minimal irrigation, they are giant perennial grasses requiring only to be planted once ever in some cases and 25 to 75 years in other cases.
- They flourish on marginal soil requiring very little input of fertilizers and no chemical/petroleum based fertilizers, herbicides or pesticides at all.
- They sequester 40% more carbon than trees, and are able to remediate polluted soils and hazardous sites safely into structural construction components.

We have the expertise to develop the proper criteria to establish qualified Hawaii grown and properly processed structural bamboo as a safe, strong and durable construction material.

Benefits of establishing structural bamboo as a certified building material include,

1. Reduction of water currently used to irrigate sugar cane and pineapple.
2. Reduction of imported petroleum based fertilizers, pesticides and herbicides.
3. Job creation: Growing, propagating, maintaining, processing, manufacturing etc. . .
4. Improved health of the aina.
5. Carbon sequestration: which may be marketable as credits.

In addition, Hawaii with a stable social, economic, political, and public works infrastructure can easily be an ideal location for timber bamboo to be grown. Bamboo, once considered a weed will certainly hold a significant role as a timber supply for the future of building construction as traditional wood products continue to rise in cost and their sources are over harvested. Hawaii could become a leading manufacturer and exporter of not only timber products (i.e. kit homes, disaster relief housing, affordable housing for our islands and nation etc...) but also a producer of paper, furniture and textile based products from bamboo. Further, with State economic support the Bamboo industry could be our first real agriculturally based manufacturing industry in the Hawaiian Islands.

Respectfully yours,

Maria N. Isotov-Chang, Land Use and Water Resources Planner
LAND & WATER PLANNING AND CONSULTING

~~XXXXXXXXXX~~

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 05, 2009 1:48 PM
To: TIATestimony
Cc: dean@deanjohnstondesigns.com
Subject: Testimony for SB1645 on 2/9/2009 1:35:00 PM
Attachments: Letter of Support for SB NO 1645.pdf

Testimony for TIA 2/9/2009 1:35:00 PM SB1645

Conference room: 224
Testifier position: support
Testifier will be present: No
Submitted by: Dean Johnston
Organization: Individual
Address: 785 Hamana Pl Haiku, HI
Phone: 808-264-2273
E-mail: dean@deanjohnstondesigns.com
Submitted on: 2/5/2009

Comments:
Thank you very much,
dean

Johnston•Cassel Design Studio

71 Baldwin Avenue, B-6, Box 790731 Paia, Hawai'i 96779
www.johnstoncassel.com design@johnstoncassel.com
808•579•9778 office 808•442•9966 fax

February 5, 2009

To whom it may concern,

I am very excited to see the legislature taking the proactive role in bringing sustainability to the Hawaiian islands.

Many species of bamboo are proven to be stronger than steel, durable with proper non-toxic preservation strategies and ecologically sound.

Tropical, clumping, non-invasive bamboo species are ideally suited to Hawaii's climate and volcanic origin.

They are drought resistant requiring minimal irrigation, they are giant perennial grasses requiring only to be planted once ever in some cases and 25 to 75 years in other cases.

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They sequester 40% more carbon than trees, and are able to remediate polluted soils and hazardous sites safely into structural construction components.

My award winning Masters of Architecture thesis (Univ. of Hawaii, 2002), produced in collaboration with the University of Hawaii College of Engineering and School of Architecture, tested six bamboo species, four from Hawaii and two from Vietnam. In those tests one of the Vietnamese species was *Bambusa stenostachya*, which is now the first and only structural bamboo recognized nationally by the International Codes Council. With that approval Bamboo Living Homes have designed and built, to code, over 100 hurricane ready homes throughout Hawaii. In my testing the four Hawaiian grown species tested equal to or stronger than the currently approved species.

We have proven that we are growing world class structural bamboo. Hawaii is now at the cusp of becoming a certifiable producer and exporter of the first U.S.A grown structural bamboo.

We have the expertise to develop the proper criteria to establish qualified Hawaii grown and properly processed structural bamboo as a safe, strong and durable construction material.

Benefits of establishing structural bamboo as a certified building material include,

1. Reduction of water currently used to irrigate sugar cane and pineapple.
2. Reduction of imported petroleum based fertilizers, pesticides and herbicides.
3. Job creation: Growing, propagating, maintaining, processing, manufacturing etc. . .
4. Improved health of the aina.
5. Carbon sequestration: which may be marketable as credits.

Mahalo
Dean Johnston M.Arch. LEED AP

Sent: Thursday, February 05, 2009 10:14 AM
To: TIATestimony
Subject: RE SB 1645

Aloha,

I have studied and worked with bamboo for nearly 50 years. My study has included the multiplicity of uses of bamboo by cultures from all over the world.

It should now be well accepted that bamboo is an eminently renewable, easy to grow resource with outstanding properties for construction. Excellent examples exist from the Tropical and Sub-tropical parts of our planet, and also from some of the temperate parts.

Some of the most profound recent examples are from Colombia and Costa Rica. In Colombia there are structures framed of bamboo that are over 100 years old and still in good condition. The current generation of bamboo architects in Colombia have amply demonstrated its value and flexibility in modern construction (see the Zeri Pavilion by Simon Velez). In Costa Rica various housing projects made from bamboo have withstood severe earthquakes (there are videos available of some of these building projects). These and other similar building projects have been thoroughly engineered and tested to rigorous standards and verified by third party sources. (see resources below).

Compared to the current standard of "fir/larch" stick framing materials available from HPM, Trojan, Honsador, etc. even moderately good quality construction grade bamboo is better in terms of strength in compression, and strength in tension. Bamboo made in to laminates to create "plywoods" through "glu-lam" type construction materials can achieve strengths and load bearing capabilities exceeding any traditional wood based products generally available today.

The caveats regarding good quality construction bamboos are as follows:

1. an acceptable/ known construction grade species. Ximena Londono (a well known bamboo taxonomist and president of the Colombian Bamboo Society) claims there are over 20 elite species of construction grade bamboos known so far. (please note that most of these species are growing here in Hawai'i)
2. the selected bamboo species must be grown in an appropriate environment (note: such environments are plentiful here in Hawai'i),
the bamboo needs to be harvested at an appropriate age, and handled properly post harvest.

If in fact we as a state are interested in energy and resource independence, bamboo can be of major importance in achieving this goal.

Mahalo for you attention,

Peter

Peter Berg
Quindembo Bamboo Nursery
<http://www.bamboonursery.com>
Kamuela, HI 96743
808-885-4968
808-987-6452

Resources (a few of many):

1. Bambu/ Bamboo - IL 31. published by the Institute for Lightweight Structures, University of Stuttgart, Germany
2. Bamboo, the Gift of the Gods by Oscar Hidalgo.
3. Building with Bamboo: A Handbook, by Jules A. Janssen

~~XXXXXXXXXX~~

From: James Weatherford [gardengreen@hawaiiintel.net]
Sent: Thursday, February 05, 2009 7:56 AM
To: TIATestimony
Subject: Support for SB 1645 - Relating to State Building Code - BAMBOO

Aloha,

This is to express strong support for Senate Bill 1645, which provides a start at using a locally grown and sustainable building product for construction in Hawaii.

My wife and I once live in a bamboo house in the Philippines and are quite aware of its great value as a building material.

We built a new house in Keaau in 2005, and used bamboo extensively inside the house for wall covering, flooring, and trim. All of this bamboo came from China.

While we very much like the bamboo in our house, we would have preferred to be able to buy a local product; and would have definitely used bamboo for structural material had that been allowed at the time.

With bamboo approved for structural material in Hawaii, the production of all bamboo building products will increase in Hawaii, thus providing better and locally-grown alternatives for building here.

Thank you for your support of Senate Bill 1645 -- for a sustainable Hawaii!

James Weatherford, PhD
PO Box 2017
Keaau, Hawaii 96749

808-982-5549

[REDACTED]

From: Julian Ruppert [julian@bambooworks.com]
Sent: Saturday, February 07, 2009 5:35 AM
To: TIATestimony

Dear Senator Kalani English,

I am writing this letter in strong support for the passing of SB 1645 in order to direct the state building code council to establish standards and criteria allowing the use of bamboo grown in Hawaii as an accepted construction material. I am a long time supporter for the use of bamboo in construction.

Structural bamboo housing is a major step in sustainable green building construction and is emerging on the global scene. More than 100 ICC-ES code approved bamboo buildings manufactured by Bamboo Technologies have already been built across the Hawaiian Islands. These buildings are strong and durable. Already Bamboo Living® Homes have withstood multiple hurricanes.

These buildings have been built with the first ever certified structural bamboo poles approved for use in construction. Structural bamboo is a high quality building material and structural bamboo grown in Hawaii should be approved for use in construction right here in Hawaii.

I bamboo plantations and housing and want to support the use of structural bamboo grown in our state for components in our building industry.

Mahalo,
David Julian Ruppert
Phone 808-821-8688
Cell 808-652-3620
Fax 808-822-3555
julian@bambooworks.com
<http://bambooworks.com>



From: mauiforest@aol.com
Sent: Saturday, February 07, 2009 11:46 AM
To: TIATestimony
Subject: Support for SB 1645

Dear Senator Kalani English,

I am writing this letter in strong support for the passing of SB 1645 in order to direct the state building code council to establish standards and criteria allowing the use of bamboo grown in Hawaii as an accepted construction material. I am a long time supporter for the use of bamboo in construction.

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These buildings have been built with ~~the first ever certified structural bamboo poles approved for use in construction.~~ Structural bamboo is a high quality building material and structural bamboo grown in Hawaii should be approved for use in construction right here in Hawaii.

-
I have viewed the video footage of Hunter Lovins <<http://www.vimeo.com/3054267>> support for bamboo plantations and housing and want to support the use of structural bamboo grown in our state for components in our building industry.

-
Mahalo,

Jim Rossi

~~Great Deals on Dell Laptops. Starting at \$499.~~

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 05, 2009 4:25 PM
To: TIATestimony
Cc: cromwell.ross@gmail.com
Subject: Testimony for SB1645 on 2/9/2009 1:35:00 PM

Testimony for TIA 2/9/2009 1:35:00 PM SB1645

Conference room: 224
Testifier position: support
Testifier will be present: No
Submitted by: ross cromwell
Organization: Individual
Address: 3536 akala dr kihei, hi
Phone: 808 479 0363
E-mail: cromwell.ross@gmail.com
Submitted on: 2/5/2009

Comments:
I would like to have a bamboo home for myself someday.

From: Robert Henrikson [roberthe@sonic.net]
Sent: Sunday, February 08, 2009 8:33 PM
To: TIATestimony
Subject: Support of SB 1645

Dear Senator Kalani English,

I am writing this letter in strong support for the passing of SB 1645 in order to direct the state building code council to establish standards and criteria allowing the use of bamboo grown in Hawaii as an accepted construction material. I am a long time supporter for the use of bamboo in construction.

Structural bamboo housing is a major step in sustainable green building construction and is emerging on the global scene. More than 100 ICC-ES code approved bamboo buildings manufactured by Bamboo Technologies have already been built across the Hawaiian Islands. These buildings are strong and durable. Already Bamboo Living® Homes have withstood multiple hurricanes.

These buildings have been built with the first ever certified structural bamboo poles approved for use in construction. Structural bamboo is a high quality building material and structural bamboo grown in Hawaii should be approved for use in construction right here in Hawaii.

I want to support the use of structural bamboo grown in our state for components in our building industry.

Mahalo,
Robert Henrikson

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<http://www.hanapalmsretreat.com> | Hana Palms Retreat in Heavenly Hana Maui Hawaii
<http://www.casaguadalupesanimiguel.com> | Casa Guadalupe in San Miguel de Allende Mexico
<http://www.wildthymefarm.com> | Wild Thyme Farm Retreat Center in Olympia Washington

<http://www.roberthenrikson.com> | Green Visions for an Ecological Future
<http://www.spirulinasource.com> | Resource Center for Spirulina Algae
<http://www.bambooliving.com> | Live in the Beauty and Grace of Natural Bamboo
<http://www.bamboosun.com> | Connecting Bamboo with Green Architecture <http://www.devijuice.com>
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