WORLD BUSINESS ACADEMY
Sharing the Vision... Building the Network... Healing the Planet

PERSPECTIVES

by Rinaldo S. Brutoco

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Fireproofing California

As of today, twice as many acres have burned in California this year than last. That isn't an evolutionary deterioration of our public lands—it is a catastrophic, geometric increase in forest destruction that will continue to get worse on an accelerating curve indefinitely into the future. We have three choices on how to react to this unavoidably destructive new, and permanent, reality.

Our choices are: 1) do nothing different, continue to build and rebuild in forest adjacent areas with the attendant annual loss of property in the billions and a growing list of human casualties, which on its face is a disastrous "solution" that is 100 percent unsustainable; 2) abandon all areas adjacent to fire prone areas, which in California is totally impractical given the ever-increasing pressure for more affordable housing that has consistently pushed development of "suburbs" and vacation homes into the beautiful but incredibly dangerous habitats—we're not going to abandon our greenbelts; and 3) pass new building codes that would require any home built in a fire prone or adjacent area to be able to withstand a forest fire passing through for at least 24 hours to remain totally intact and protect inhabitants from the fire raging around them. Do you think #3 is tough to do? Think again. We actually know how to build such houses and we better start requiring that they be built that way. And yes, we should require commercial buildings to be similarly fire safe – not just fire resistant!

Let's start by looking at the folly of the building codes we require for fire prone areas. They are insane! Really, we intend to (and currently are planning to) rebuild Paradise, California with wooden framed timber and plaster when we KNOW climate change will re-ignite the forest there within 20 years or less. Isn't that insane? Isn't that like "doing the same thing over and over and expecting a different result?"

We know how homes and businesses catch fire. Either an ember lodges on a wooden siding or under an eave, or the heat of the fire literally blows out the windows causing the interior to catch fire. We've long known in California that sealing all eaves is critical for fire safety. We also have learned that a simple, heavy, wooden shutter swung over windows and latched in place leaves the windows safe from fire even if it burns overhead. So, how about all the wood that house is built with? The only way to make a fire safe house is to ban all combustible materials in the construction of the structure. Sound difficult? It is as simple as embracing non-wood building technologies, some of which are more than 1,000 years old when they were used to build the Great Wall of China, and subsequently to build the Alhambra (Spain's most beautiful Moorish palace dating from the 13th century). The word "Alhambra" means "red dirt" which is what the Alhambra's original structure was built from. Literally, rammed earth construction is building major edifices from dirt!

It is practical and totally economic to build rammed earth structures that will last as long as the Great Wall of China, be as beautiful as the Alhambra, and be able to be sealed so that a direct forest fire raging overhead will not kill the inhabitants or destroy their possessions. This is particularly important when we realize how many people are "trapped" either in their homes, swimming pools, or cars attempting to escape forest fires on roads that become engulfed in flames faster than residents can react. You see, living in a rammed earth house is like living in a designer cave with great lighting, beautiful windows, and all the modern amenities. When the fire comes along one merely throws the shutters tight, goes inside, and opens a good bottle of wine while awaiting the fire to pass overhead! Of course, all such buildings would have sealed eaves and most likely ceramic tiles sitting on a cement base (the standard roofing material here in Santa Barbara) which is also 100 percent fireproof! Yes, it really is that simple. In fact, rammed earth construction is only one method that can create structures that are 100 percent fireproof—not just fire resistant.

There are other promising modern construction techniques which could also yield fireproof structures such as 3D printing housing out of a cement slurry. The World Business Academy has been researching this and several other alternative, fire safe building techniques for more than a decade and knows of a third method that shows great promise for the future. But why wait for the future, why not require structures be built with at least the fireproofing provided by a thousand plus year old technology like rammed earth? All it needs is a building code that requires, as mentioned at the outset, that any structure be able to withstand 24 hours of a direct firestorm and home builders will quickly realize that such a strict requirement can be met today with ancient building technologies.

What else do we have to do if we want our citizens to be able to enjoy the woods we so dearly love without putting themselves, all of their possessions, and their loved ones at risk? Well, let's start with the insanity of above ground electrical lines. Not only are they dangerous, they are stupid. We know our forests will burn. Let's require undergrounding of all utilities in such areas. It shouldn't be optional. We also have to ban all high-power transmission lines in any remote area as we know they cause forest fires.

The statistics are overwhelming. We have all the evidence we need that Edison and PG&E cause at least 60 percent of our forest fires with their above ground high transmission lines. The have to go. Period. We have to stop paying the monopoly utility companies to build and re-build those archaic transmission lines, and then have insurance claims to private property owners on top of it that we rate payers reimburse year after year after year. Enough!!!

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