

Claire Bonham-Carter – *LEED AP BD+C Principal, Director of Sustainable Development Design and Planning, AECOM*

- AECOM partnered with Carbon Disclosure Project Cities Program to develop CDP Cities 2012 Global Report
 - CDP Cities Program focuses on GHG mitigation, CC adaptation, and water issues within C40 and other cities
 - 73 cities responded to recent survey
 - Resource: www.cdpproject.org: interactive website featuring best practices and issues highlighted by report
- 2012 survey results highlights:
 - Population and density: high density cities have lower GHG per capita
 - Risk:
 - Economic risk: Climate responsive cities have higher economic output (i.e. they gain economic opportunities such as green jobs) – example: Oristano, Italy
 - Physical risk: many respondents affirm that climate change does pose a physical risk to their cities
 - Mediterranean Cities- differences in findings for Mediterranean vs. non-Mediterranean cities
 - Just 47% of Mediterranean cities respondents say they have climate adaptation plans in place vs. 76% of non-Mediterranean cities
 - 73% of Mediterranean cities see substantive risks to their water supply in the future vs. 61% of non-Mediterranean cities
 - Mediterranean cities reported more risk from drought and heat waves than other cities but are less likely to have a resiliency plan in place

Max Moritz – *Associate Cooperative Extension Specialist, University of California, Berkeley*

- Overview: We need to think deeply about how we treat fire; we often don't think of it in terms of sustainability development planning, but it is highly critical and intersects with many other issues -- water, food scarcity, public health/safety, etc.
- What is at risk and why? (vulnerability)
 - Mediterranean environments attract a lot of people, putting many lives and properties at risk to fire
 - Mediterranean regions are prone to fire due to unique climate and wind patterns
 - Pronounced warm, dry seasons and hot, dry winds
 - Mediterranean plants are adapted to fire, but our built environments are not; ex. we continue to build homes in more fire-prone areas
 - Power grid (U.S., Australia cited) not designed with fire risk in mind; many fires started by downed power lines -- interaction between energy infrastructure and fire exposure
 - Fires cause food scarcity -- example: Russian Fires 2012
- What may the future bring?
 - Pronounced increased shifts in fire activity ahead of us, based on climate projections
- What can we do to adapt?
 - Map fire exposures like other natural hazards
 - Coexist with fire and plan ahead for it, not just react to it -- should integrate fire considerations into sustainability plans

- Build fire-resistant communities - for example, see: “2010 Strategic Fire Plan for California” document

Abby Hall – *Policy Analyst, US EPA Office of Sustainable Communities*

- Overview -- Mediterranean cities are prone to extreme heat, air quality, and other impacts of climate change, and impacts to the built environment are expensive to remediate, while sense of urgency in acting is often low
- Ms. Hall published two Med City climate adaptation case studies, 2010-2011:
 - Lyon, France:
 - City has good mix of existing and new structures
 - Primary climate change impacts faced by Lyon:
 - Heat waves, urban heat island – esp. in summer
 - Rainfall reductions
 - 2003 heat wave caused 14,000 deaths across France; public health motive to reduce temps
 - Example: Shade tree planning initiatives
 - Barcelona, Spain:
 - Redevelopment period in 1990s - Olympics, etc.
 - Primary climate change impacts -
 - sea level rise - saltwater intrusion impacts on drinking water, irrigation
 - rainfall reductions
 - temperature increase, drought
 - Sense of urgency to act on climate change is low, because city hasn’t yet experienced serious impacts from climate change and is focusing on what are perceived as more pressing priorities (economy, etc.)
- Resources:
 - U.S.: EPA and FEMA partnership to support local resilience efforts – hazard mitigation planning, disaster recovery, CC adaptation
 - Website: http://epa.gov/smartgrowth/fema_moa.htm

J.R. DeShazo – *Director, UCLA Luskin Center for Innovation Associate Professor, Department of Public Policy*

- Sustainable urban planning considerations:
 - Scale -- from building level, to street level, to city, to region, to utility/infrastructure level
 - Policies -- voluntary standards vs. mandatory codes; policies tend to interact and nest within each other
 - Water and street design are two biggest challenges, in presenter’s view
 - Streets -- organizational challenges (who has authority to make changes when multiple agencies involved)
 - Water -- political will is the issue - price of water needs to rise to incentivize actions
- Scale issues:
 - Street level scale -- parkways, sidewalk, and streets themselves
 - “Living Streets Movement” - street design that supports sustainability
 - Ex: urban forests on sidewalks, pedestrian friendly streets

- Streets are one of the design elements that we are least prepared to deal with -- partly because multiple agencies involved
- Neighborhood level -- CA has been at forefront of smart growth planning
- City level
- Region level
- Utility/infrastructure level -- utility scale, storm water management systems, transportation

Justin Luedy – *Environmental Specialist, Port of Long Beach*

- Overview of Port operations:
 - POLB consists of 3230 acres of land, 4500 acres water, 10 piers, 80 berths; 7 container ship terminals; 2nd busiest seaport in N. America, after Port of LA
 - Port operations are separate from city council
- Climate change impacts to Port -- SLR, storm, and waves/tide damage, to port and seawall infrastructure, continuity of operations, supply chains
- Port's climate resiliency planning objectives:
 - Policy making, planning, infrastructure design
 - Climate change risks
 - Resilience and business continuity of Port operations and transportation system
 - Strategy to protect built environment
 - Community outreach/education
 - Methodology for climate change adaptation and coastal resiliency planning, to other seaports
- Plan coordination:
 - Guidance documents --
 - Best practices: ICLEI; U of Washington Climate Impacts Group (CIG)
 - Army Corps of Engineers - SLR projections
 - West Coast Governor's Agreement on Ocean Health
 - Coordinate with other agencies, locally and upstream
 - Feedback from POLB divisions
 - Stakeholders
- Plan components: include an impacts study; plan development; and implementation guidelines

Eduardo Torres Demesa – *Chief, Plan Formulation Branch Planning Division, Los Angeles District, U.S. Army Corps of Engineers*

- USACE is at federal level, but project implementation requires local participation
 - Funding is driven by federal priorities
- Example project: ecosystem restoration of Los Angeles River:
 - LA River flows 32 miles within City of LA
 - Multiple restoration objectives - e.g., restore riparian and aquatic habitats; restore hydrologic and hydraulic processes; improve water quality, infiltration, recharge
 - Several charettes held in 2009, w/ public and other stakeholder input
 - Outcome: 200+ measures recommended; some under consideration include:
 - Remove concrete, widen channel
 - Flood by-pass
 - Create water storage/detention
 - Restore habitats

- Connect neighborhoods to river
- Constraints - levee regulations, tremendous costs, etc.
- Next steps include: select final measures, complete EIR, public review, design phase

Kelly Klima – *Climate Adaptation Policy Advisor Center for Clean Air Policy (CCAP)*

- Ask the climate question: How will infrastructure, land development, and investment decisions affect GHG emissions and resilience to climate change impacts?
 - Reference: “Urban Leaders Initiative”
 - An issue is that mitigation is an easier idea for people to connect to than adaptation -- we use iconic images of light bulbs, wind turbines, etc. to represent mitigation, but photos of far-away disasters to represent adaptation
- Actions:
 - Research economics and best practices
 - Planning now saves money later - ex: Hurricane Katrina and levees
 - Stakeholders must find own self-interest if they are going to engage in a solution (see: CCAP’s Growing Wealthier matrix)
 - Ex: green roofs - Chicago - 74 F green roof vs. 105 F degree conventional roof
 - Ex: economic benefits captured by retrofit, subway flooding reduction, and other adaptation programs in NYC, Portland, Houston, Philadelphia, and King County, WA
 - Best practices advance multiple goals (ex: air sealing of a building promotes both mitigation and adaptation)
 - Create public-private partnerships to advance climate resilience (real estate, insurance, finance, power sector)
 - Embed climate risk management into business continuity and strategic planning efforts
- Important to frame issues in terms of the stakeholder community’s self-interests
- Resources: selected publications available at: www.ccap.org/adaptation.html

Mia Lehrer – FASLA, President, Mia Lehrer + Associates

- Ms. Lehrer’s focus: large scale infrastructure design projects -
 - Example projects: El Toro Air Field, CA; Belmont High School; LA River
 - Baldwin Hills Park: for every dollar spent on green infrastructure, \$1.72 dollars of benefit calculated
- Southern California issues and measures:
 - 23 million people; hot zone: LA plus Ventura plus Orange Counties
 - Owens Valley -- dry river: dust disperses toxic chemicals; dust mitigation project underway by Ms. Lehrer’s firm and others, with LADWP
 - Examples of green infrastructure measures that can be taken: permeable paving, community gardens, tree plantings, walking trails, urban runoff infiltration, river ways into parks
- Recommendations:
 - Organizations tend to work in silos -- need more communication and collaboration across agencies, stakeholders
 - Better education of all stakeholders

Hadley Arnold – *Co-Director, Arid Lands Institute, Woodbury University*

- Overview:

- Multi-year, “Dry Land Design” partnership with City of Burbank CA; several objectives:
 - Design with energy and water in mind
 - Design for variability of environmental conditions (changing weather, hydrology, etc.)
 - Design for quality of public space (social equity) -- e.g., design water into public spaces
- Burbank has identified water capture, aquifer recharge as a critical priority; largely to improve groundwater quality (dilute contaminants - BurSuperfund site)
 - 8% of City’s waste water recycled
 - Water initiatives remain separate from energy initiatives, but future integration being evaluated
- Process:
 - Footprinting of energy and water inputs
 - Identification of “low hanging fruit” and measures
 - More: www.aridlands.woodbury.edu

Matthew Heberger – P.E., Research Associate, Water Program, The Pacific Institute

- Overview: City in East Bay of San Francisco with diverse population of 390,000; economic hub w/ vulnerable social groups, assets, infrastructure; exposed to broad range of climate impacts
- Project background:
 - 2009 California SLR study found low income and minority populations at higher risk
 - 2011 CA studies have moved past climate impacts, towards “vulnerability and adaptation”
- Can community involvement lead to better adaptation planning?
 - Yes -- LG and community organizations are important partners, and are interested in climate change -- first responders to impacts
- How can we translate results from climate models in a way that is meaningful to community organizations and residents?
 - What doesn’t work: technical jargon (A1 emissions scenario, etc.), statistical graphs, etc.
 - What does work:
 - Lead discussions with local impacts -- heat waves, asthma attacks, etc.
 - Maps make it real - examples:
 - Number of high heat days in an area
 - Maps of impacts that show individual homes (sea level rise)
 - Animated maps - e.g., fire risk - as done by Max Moritz’s group
 - Develop early warning systems (flooding, etc.)
- Social vulnerability to climate change impacts:
 - Risk = exposure x vulnerability
 - Vulnerability factors and resilience factors - defined in presentation
 - Studies show that racial minorities and low income populations in US shown to be more vulnerable to public health, financial burdens following natural disasters; also at risk: non- English speakers, renters, etc.
 - Pacific Institute developed a “Social Vulnerability Index” for State of CA:
 - Color-coded map shows census tracts with greater vulnerability to climate change impacts
 - Layers areas of high impact, with areas of high vulnerability
 - National Social Vulnerability Data also available -- see slides

- Only a minority of US cities include vulnerability assessments in their climate change planning
- Resource: www.climatechange.ca.gov

Claire Robinson – *Managing Director, Amigos de los Rios*

- Project overview: Adapt idea of Emerald Necklace Park Network of Boston, and translate idea to Los Angeles, to improve community resilience to CC impacts and offer other benefits
 - 17-mile stretch of land along Whittier Narrows, San Gabriel River
 - 9 year project history, multiple measures/outcomes - example measures:
 - Transform trash heap to exercise trails
 - Integrate native plants, trees, butterfly gardens
 - Play areas
 - Storm water capture - swales, etc.
 - Park areas interface w/ public transportation
 - Has activated the community -- e.g., 200 youth trained to participate
 - Got support from wilderness coalitions across the country -- Chicago, Cleveland, Milwaukee, Houston, Portland
- Regional challenges:
 - Extremely fragmented governance (LA just one of 88 cities in County)
 - Segregation
 - Requires multiple partnerships (government agencies, community, etc.)
- Resource: Vibrant Cities Task Force

Questions and Discussion:

- How can cities like Barcelona (which are struggling with other challenges) recognize economic benefits of CC strategies?
 - Focus on initiatives like building energy efficiency retrofits, which can show more tangible ROI
 - Focus on local actions
- Does our relative ease of living in Mediterranean cities (e.g., our temperate climate) lead to a sense of complacency in acting on CC issues?