SUSTAINABLE HIGHER EDUCATION RESEARCH ALLIANCES (SHERA)
CENTERS FOR COLLABORATIVE RESEARCH

USAID SHERA (SHERA) is a $20 million, five-year higher education partnership program supported by the United States Agency for International Development (USAID) and implemented by the Institute of International Education (IIE) to increase the research capacity of the Indonesian higher education scholars through the collaboration of Indonesia and U.S. researchers to conduct world-class research, to create collaboration among Indonesia and U.S. higher education institutions (HEIs) in the fields of science, technology and innovation, and to improve the enabling environment for quality research, and professional development opportunities for women. SHERA collaborated with the Ministry of Research, Technology & Higher Education (Kemristekdikti) to select 5 (five) research focus areas critical to Indonesia’s development and identify the 5 (five) Indonesian universities that will establish and host Centers for Collaborative Research (CCR) within the priority research areas.
Each CCR will be comprised of at least five partnership members – one lead, top-tier Indonesia higher education institution that will host the CCR, at least three affiliate Indonesian HEIs and one U.S. university. Depending on the CCR, partnership members will also include local government and research institutions, non-governmental organizations and the private sector.

### ENVIRONMENT, ENERGY AND MARITIME SCIENCES RESEARCH FOCUS AREA
**CENTER FOR THE DEVELOPMENT OF A SUSTAINABLE REGION (CDSR)**

**Lead:** Universitas Gadjah Mada (UGM)

**Partner:** Universitas Indonesia, Institut Teknologi Bandung, Institut Pertanian Bogor, Universitas Bangka Belitung, Universitas Negeri Gorontalo, Universitas Muhammadiyah Gorontalo, and University of Colorado Boulder.

CDSR will develop a multidisciplinary collaboration to research and implement a hybrid and efficient energy system, build the capacity of local industry and create a network of renewable energy stakeholders within Indonesia. CDSR will develop prototypes to support near zero-energy buildings in tropical urban areas called Building Integrated Photovoltaic.

### PUBLIC HEALTH AND INFECTIOUS DISEASE RESEARCH FOCUS AREA
**CENTER FOR COLLABORATIVE RESEARCH ON ACUTE RESPIRATORY INFECTIONS (CCR ARI)**

**Lead:** Universitas Padjadjaran (UNPAD)

**Partner:** Universitas Syiah Kuala, Universitas Lambung Mangkurat, Universitas Mataram, Universitas Pattimura, and University of Colorado, Denver.

CCR ARI has the goal of enhancing the capacity among Indonesian universities to perform high quality clinical research that addresses the burden of diseases and use of immunizations, and prevents viral and bacterial respiratory illnesses in highly impacted populations including young children, pregnant women, and the elderly.
INNOVATIVE TECHNOLOGIES RESEARCH FOCUS AREA
NATIONAL CENTER FOR SUSTAINABLE TRANSPORTATION TECHNOLOGY (NCSTT)

Lead: Institut Teknologi Bandung (ITB)
Partner: Universitas Diponegoro, Universitas Sriwijaya, Universitas Lambung Mangkurat, Institut Teknologi Kalimantan, Universitas Sebelas Maret, Universitas Sam Ratulangi, and Massachusetts Institute of Technology

NCSTT has the goal of developing advanced technologies for the next generation of electrical vehicles by creating integrated transportation solutions that address technology, policy, infrastructure and planning development in Indonesia. This CCR will develop electric vehicle systems and resolve critical issues in Reserved Energy Storage System such thermal management, safety, charging speed, and energy density/capacity of the battery system.

FOOD SECURITY AND SELF SUFFICIENCY RESEARCH FOCUS AREA
INTERDISCIPLINARY GRADUATE EDUCATION & RESEARCH IN ANIMAL BIOTECHNOLOGY AND CORAL REEF FISHERIES TO ACHIEVE INDONESIA FOOD SECURITY (ANBIOCORE)

Lead: Institut Pertanian Bogor (IPB)
Partner: Universitas Brawijaya, Universitas Padjadjaran, Universitas Syiah Kuala, Universitas Udayana, Universitas Mataram, Universitas Nusa Cendana, Universitas Papua, and University of Rhode Island and Mississippi State University.

ANBIOCORE’s goal is to increase the country’s food security and self-sufficiency by supporting the advancement of livestock biotechnology and conservation of coral reef fisheries in Indonesia. They will contribute data to three vital domains within the Ecosystem Approach to Fisheries Management and develop functional genomic marker for bull fertility.

URBAN PLANNING AND DEVELOPMENT RESEARCH FOCUS AREA
SCIENTIFIC MODELLING, APPLICATION, RESEARCH & TRAINING FOR CITY CENTERED INNOVATION & TECHNOLOGY (SMART CITY)

Lead: Universitas Indonesia (UI)
Partner: Universitas Diponegoro, Universitas Padjadjaran, Universitas Udayana, Universitas Sriwijaya, Universitas Sumbawa, and University of Illinois, Urbana Champaign, University of Florida, and the Savannah State University.

SMART CITY’s goals are to encourage research groups, technical laboratories and individual researchers to use interdisciplinary approaches in their work, collaborate on a global scale, and create scientific and technological innovations as response to facing urban challenges, including the adoption of green technology, information technology in urban administration, services, and governance; reliability of urban infrastructure; and the rapidly declining quality of life, health, and general wellbeing.
WHERE ARE CCR PARTNERS LOCATED?

1. RED — Center for Development of Sustainable Region (CDSR) (Universitas Gadjah Mada, Universitas Indonesia, Institut Teknologi Bandung, Institut Pertanian Bogor, Universitas Bangka Belitung, Universitas Negeri Gorontalo, Universitas Muhammadiyah Gorontalo) — US PARTNER: University of Colorado Boulder
2. YELLOW — Interdisciplinary Graduate Education & Research in Animal Biotechnology & Coral Reef Fisheries to Achieve Indonesia Food Security (ANBI CORE) (Institut Pertanian Bogor, Universitas Brawijaya, Universitas Padjadjaran, Universitas Syiah Kuala, Universitas Udayana, Universitas Mataram, Universitas Papua) — US PARTNER: University Of Rhode Island & Mississippi State University
3. BLUE — National Center for Sustainable Transportation Technology (NCSTT) (Institut Teknologi Bandung, Universitas Diponegoro, Universitas Sriwijaya, Universitas Lambung Mangkurat, Institut Teknologi Kalimantan, Universitas Sam Ratulangi, Universitas Negeri Surakarta) — US PARTNER: Massachusetts Institute of Technology
4. GREEN — Center for Collaborative Research on Acute Respiratory Infections (CCR AIR) (Universitas Padjadjaran, Universitas Syiah Kuala, Universitas Lambung Mangkurat, Universitas Mataram, Universitas Pattimura) — US PARTNER: University of Colorado Denver
5. PURPLE — Scientific Modelling, Application, Research, & Training for City Centered Innovation & Technology (SMART CITY) (Universitas Indonesia, Universitas Diponegoro, Universitas Padjadjaran, Universitas Udayana, Universitas Sriwijaya, Universitas Teknologi Sumbawa) — US PARTNER: University of Illinois at Urbana Champaign, University of Florida, Savannah State University

Phone: (62 21) 8353947. Email: shera@iie.org
Implemented by:

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