IAH network on “Coastal aquifer dynamics and coastal zone management”

QUESTIONNAIRE

IAH national committees, IAH members and non members from all around the world involved in SWI and SGD research and management are kindly asked to fill in the questionnaire in this page with as many details as possible.
A world database will be set up and made available, with basic coastal aquifer main characteristics.
We expect to gather standard and comparable information on the knowledge level and hopefully the state of the art of the research on SWI and SGD, and coastal aquifer management methods adopted around the world

1)	Location of aquifer (country, more specific location):	North Central Coast of Vietnam
2)	Reported by:	Vu Thanh Tam,Tran thanh Lee and Okke Batelaan
3)	Type of medium (karst, porous, fracture)	Porous and fracture
4)	Type of aquifer (phreatic or confined)	Aquifer system consisting of a phreatic(shallow) aquifers and confined (deep) aquifers
5)	Main lithology - (e.g. gravel, sand and clay)	Geological formations exhibit highly heterogeneous lithologies
6)	Hydrochemistry: fresh or saline	Fresh and Saline
7)	Saltwater intrusion: lateral from sea or lakes - upconing	Lateral intrusion from sea
8)	Aquifer geometry: hydraulic characteristics	Aquifer thickness: phreatic up to 37 m , confined up to 59 m; Hydraulic conductivity: phreatic 0.47 - 16.31 m/day confined 2.04 - 37.35
9)	Aquifer parameters: storage - annual water pumping - (in MCMA - millions cubic meters, annually)	Ground Water Abstraction: about 201.984 m3/d
10)	Depth of aquifer (water level and bottom) - water level 5-30 m - aquifer depth - 50-200 m	Aquifer depth: phreatic -4 - 29 m confined -12 - 83 m; Water level: phreatic +1.2 - 1.5 m; confined +0.7 -4 m
11)	Major chemistry (anions - ?; Cations - ?):	Ca-Na-HCO3-Cl
12)	Major salinity sources:	Seawater intrusion
13)	Population:	About 8000000 abitants and the main water utilization are: Irrigation(especially),Domestic and Industrial use
14)	Aquifer status: special features - e.g. thermal springs, major faults,…	Thermal water resources are abundant in this area
15)	Investigation methods - e.g. water level measurements, EC (electrical conductivity profiles), TDEM (geophysical),	Groundwater level,water sample chemical analysis and geophysical Dc resistivity measurements
16)	Numerical hydrological modeling, chemical and isotopic methods, age determination, IR survey, seepage meters (for Submarine Groundwater Discharge, SGD)	3D stratigraphic modelling to evaluate complex geological and hydrogeological factors of subsurface environments
17)	Monitoring methods applied and duration - water level measurements, EC (electrical conductivity profiles - seasonal)	Logger automatic reading, both waterlevel and EC, 2012 - 2014
18)	Management methods:	It has established a national program that provides: Sustainable water development,Ecosystem conservation,Protecting vulnerable communities and legal and istitutional activity
19)	Aquifer management actions:	Water protection plans and measures for pollution control
20)	Identification of existing or potential problems:	Over-exploitation is resulting in falling water tables – further causing land subsidence and salinity intrusion
21)	Annexes:	
22)	Observations:	