

China Meteorological Administration

46 Zhongguancun Nandajie, Beijing 100081, China

Tel: +86-10-68406114

Fax: +86-10-62174239

Website: www.cma.gov.cn

Zhejiang Meteorological Service

38 Jiurenheshu Hefangjie, Hangzhou 310002, China

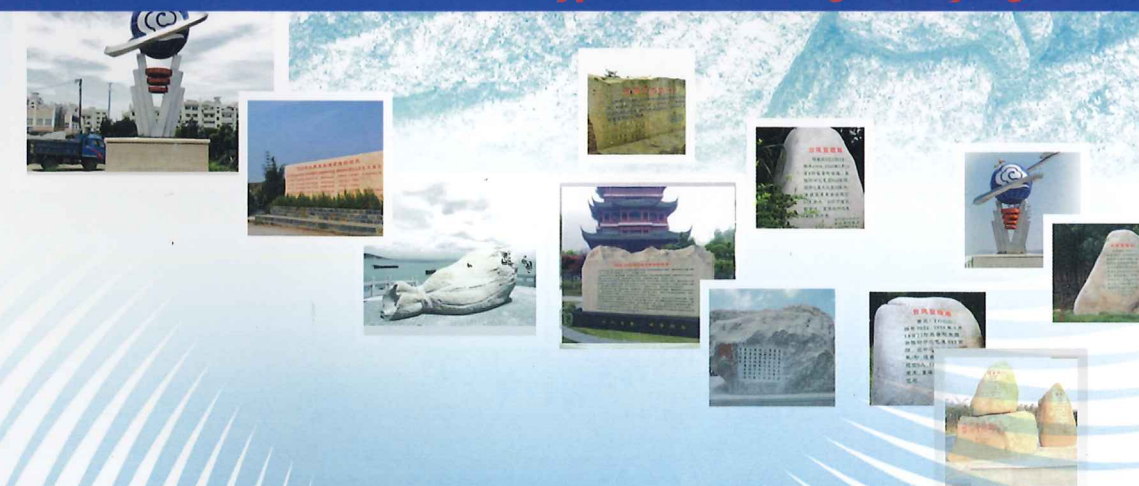
Tel: +86-571-87071884

Fax: +86-571-87071312

Website: zjqx.zjnw.gov.cn

浙江台风 登陆地标志物图集

COLLECTIVE DRAWINGS: Landmarks of Typhoon Landfalling in Zhejiang Province



中国浙江省气象局

Zhejiang Meteorological Service, CMA

February, 2012

概述/Outline

浙江省是中国最频繁遭受台风影响的省份之一。1949 年到 2010 年，影响浙江台风共 207 个，登陆 40 个，其中在温州、台州登陆最多。为了铭记灾史、警示后人，浙江省气象局于 2009 年开始在沿海地区组织开展台风登陆地标志物建设，经过三年的时间，已建成台风登陆地标志物 16 座，记录登陆的 40 个台风。

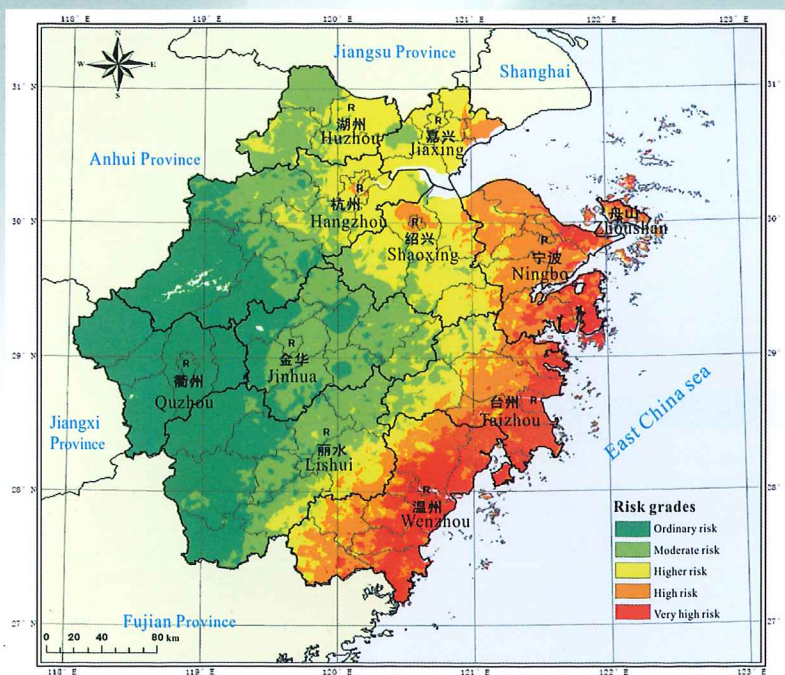
台风登陆地标志物一方面彰显我省抗台救灾人文精神，增强社会公众防台减灾意识；另一方面也加强了防台减灾科普教育，丰富社会公众文化生活。

Zhejiang Province is one of the regions that is most affected by typhoons in China. From 1949 to 2010, there are 207 typhoons influenced Zhejiang, including 40 landings, among which, Wenzhou and Taizhou ranked the most. To commemorate the passed disasters and forewarn the descendants, Zhejiang Meteorological Service was engaged in the construction of typhoon landing landmarks from 2009. By now, 16 landmarks have been built in the costal area, recording 40 typhoons since 1949.

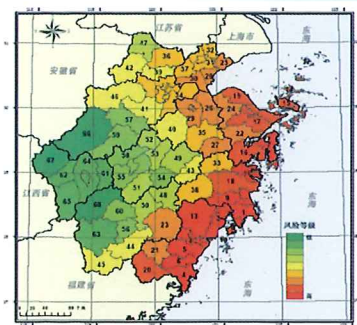
The typhoon landing landmarks, on the one hand, show the humanistic spirit of fighting against typhoons, enhancing the social public awareness of disaster reduction, on the other hand, strengthen the popular science education, and enrich the cultural life of citizens.



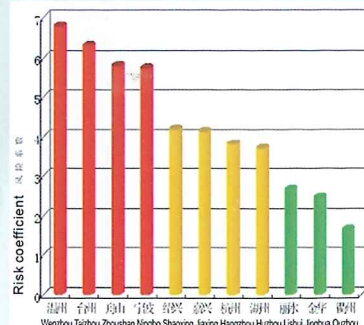
登陆浙江台风路径图
Thack of Landing Typhoons



中国浙江省台风灾害风险评估图
Distribution of typhoon disaster risk assessment in Zhejiang Province, China



中国浙江省台风灾害风险程度分县评估图
Distribution of typhoon disaster risk extent assessment of every county in Zhejiang Province, China



中国浙江省11个主要城市台风灾害风险程度评估图
Distribution of typhoon disaster risk extent assessment of 11 main cities in Zhejiang Province, China

浙江省气象局通过研究台风灾害发生的变化与影响特征，分析了境内地形地貌、水体、地质结构、人口、GDP、房屋、耕地、公共基础设施等特点和分布情况，开展台风灾害风险评估，配合政府加强台风灾害风险管理，为海堤防御和水利工程、电力、通信、交通、建筑等建设提供科学依据。

Based on research of typhoon development and impact features, the analysis is made by Zhejiang Meteorological Service on the characteristics and distribution of the topography, water bodies, geological structure, population, GDP, housing, cultivated land, public infrastructure in the territory. Furthermore, the typhoon disaster risk assessment was in order to support the government in typhoon disaster risk management so as to provide scientific bases for enhancing the seawall defense and the water conservancy project, electric power, communication, transportation, building and constructions.

超强台风“桑美”纪念碑

The Monument of Super Typhoon “Saomai”

超强台风“桑美”纪念碑位于温州市苍南县马站镇霞关办事处瑶洞村。纪念碑以腾飞的造型和“V”型的基座为主体，寓意苍南人民抗击台风的必胜信仰，螺旋状弧线直观展现了台风的风场流线，顶部的球形气象标志和醒目的双星，则给人以悦目的视觉享受。

纪念碑既作为警示和旅游景观，也作为青少年的科普教育基地，重点突出抗击气象灾害的社会影响力。

The monument of super typhoon “Saomai” is located at Yao Dong village Xia Guan office, Mazhan town, Cangnan, Wenzhou. The main body is made up of a “flying” figure and a “V” type base, meaning the belief of Cangnan people to defeat typhoon disaster. The spiral curve visually shows the typhoon wind field line. At the top, the spherical weather signs and the striking double star, gives people visual enjoyment.

It serves as a teenagers scientific education base, in order to highlight the social influence of people fighting against meteorological disasters.



为纪念象山人民英勇抗击5612号台风50周年，象山县委、县政府建设八一台风纪念碑。纪念碑净高19.56米，寓意1956年。基座分3个层面，寓意“三防”；南、北两侧各有12级台阶，寓意12号台风。浮雕共有8面，反映象山人民的抗台救灾历史。碑体由一个三角形的“L”字和环绕三角形的旋风状“8”字组成，寓意8月1日。纪念碑共用钢筋混凝土1138立方米，铺砌大理石3402块，以缅怀八一台灾的3402名罹难者。

In honor of the 50th anniversary of the Xiangshan people bravely fighting against the No.5612 typhoon, the Xiangshan government constructed the “8•1” Typhoon monument. The net height of the stele is 19.56 meters, implying the typhoon happened in 1956. And it has 8 sides recording the story of the “8•1” typhoon and people fighting against it. The monument body is made up of a triangle shaped “L” and a flying “8”, meaning the typhoon happened at Aug. 1st. 1138 cube meters cements are used to build the monument, with 3402 blocks laying on the surface, which reminds us of 3402 people died in this tremendous typhoon disaster.

“八一”台风纪念碑

The Monument of Super Typhoon “5612”



Typhoon landmark in KunYang Pingyang

平
阳
昆
阳
台
风
地
标

地标由两块风景石和环绕的花坛组成，寓意登陆平阳的两个台风。石头正面刻有“台风登陆地”文字及台风灾害介绍，背面刻有台风行进路径图，以直观的图文记载台风灾史，以警示后人。

The landmark is composed of two landscape stones and a surrounded border, meaning the two typhoons landing in the country. The stone is carved “typhoon landing location” text together with typhoon disaster illustration on the front and typhoon route map engraved on the back, in order to warn people with intuitive graphic record of typhoon disaster in history.



龙
湾
眠
牛
山
台
风
地
标
Typhoon landmark in Mianhu Hill Longwan

地标以石柱造型为主体，配合环艺绿化景观以突出台风登陆地标志物。正面镌刻“温州台风登陆处”，背面阴文着色刻出三个登陆台风概况及影响情况，以铭记灾史、警示后人。

The landmark takes pillars form as the main body, with the environmental greening landscape in order to highlight the typhoon landmark. In the face, it engraved “Wenzhou typhoon landing place”, in the back, it cut in intaglio the coloring three landfall typhoon status and influence, to remember history and warn people.

“5310”超强台风地标位于乐清市胜利塘“抗洪救灾纪念碑”旁。地标由一块天然的风景石和土砖垒成的基座组成。乐清湾是台风登陆机率较高的区域，据1960-2010年资料统计共有17个台风在这区域登陆，正面袭击类型台风占46%。地标物上方刻有四个影响严重的登陆台风介绍文字，以警示人们引起对台风灾害的深刻认识。

The landmark is located by "flood relief monument" in Shenglitang Yueqing City, next to the Gulf of Yueqing. It is formed of a natural landscape stone and brick made base. Yueqing Bay is a typhoon landing area of higher probability. According to the 1960-2010 annual statistics, there are 17 typhoons land in this area, 46% of which are frontal attacking. The landmark is inscribed with the introductory text of four severe typhoons to help people's further understanding of typhoon disaster.

1949年以来在乐清登陆的台风					
台风编号	台风名称	台风登陆时间	登陆时中心气压	登陆时中心最大风力	灾情情况
5310 (强)	苏迪勒	1961年8月15日	945hpa	55m/s (16级)	受淹农田5万亩
5314 (强)	苏迪勒	1961年5月27日	990hpa	15m/s (7级)	
5316 (强)	苏迪勒	1961年7月23日	996hpa	20m/s (8级)	
5317 (强)	苏迪勒	1961年7月30日	985hpa	25m/s (10级)	造成死亡2人

乐清“5310”超强台风地标

Landmark of Super Typhoon “5310” in Yueqing

椒江海门台风地标

Typhoon Landmark in Haimen Jiaojiang

以9015号台风登陆信息为主线，贯连股墟先民5000年前关乎风的“天问”，以及中古时期前人观测飓风（台风）的经验之谈，藉此点活题材，给游人以无尽遐思。

This landmark provides the tourist a limitless meditation by combining the No.9015 typhoon landing information and the experience of the first people observing typhoon from mediaeval times 5000 years ago.



三座地标融入周围环境，又能成为一景，在人们欣赏自然风光的同时，也能了解台风造成的危害，起到寓教于乐的作用。

There are 3 landmarks of each 3 typhoons. It's not only in harmonious of the surrounding, but shows it's own character. It could teach people the danger of typhoon while they are enjoying the natural scenery.



玉环公园台风地标

Typhoon Landmark in Yuhuan Park

地标选择“中国黑”大理石为基座，近乳白色的花岗岩做刻石。翻滚浪花蕴含“搏浪远望、后来居上”之意，象征着一代代嵛岛人迎难而上，前赴后继为保卫家园奔向抗台前线。

The landmark is made of China black marble and is harmonious with the surroundings. Various materials and patterns represent the hard work and great efforts made by local people and meteorologic workers.

三门沿赤记风亭

Jifeng Pavilion in Yanchi Sanmen

台风地标采用中国传统石结构塔式亭阁。亭内的六根石柱中面路的两根阳刻：水汇潮洪八月呈野性，风清亭阁四时养闲情；面海的两根阳刻：观风口浪尖浮沉晚日，赏海城胜景沐浴朝霞对联，亭阁命名为“纪风亭”。

The landmark is a pavilion in traditional Chinese style. On the six pillars, two antithetical couplets were engraved respectively on both sides to describe the various views and feelings when visitors facing road and sea. The pavilion was named “Jifeng Pavilion”.



普陀台风地标

Typhoon Landmarks in Putuo



路桥“卡努”台风地标

Landmarks of Typhoon Khanun in Luqiao



地标建在路桥区金清镇龙泰景区内，是当地爱国主义教育基地和休闲观光旅游胜地。此处建设台风地标更增添海洋气象文化色彩，突出防台减灾人文精神，使其成为市民旅游休闲的新亮点。

“卡努”台风地标选用石质材料，古朴、粗犷，因势象形、浑然天成，与环境融为一体。雕塑以中国传统文化中的风神传说为创作元素，以风袋造型具象体现台风形象，也隐含将台风收进口袋、消除自然灾害之意。雕塑背面镌刻“卡努”台风路径图和台风概况、风雨影响情况和灾情，让民众在欣赏艺术作品的同时学习到台风科普知识。

The landmark was built in Longtai scenic area, Jingqing Town, Luqiao District, which is a patriotic education base and a place for leisure and tourism. The landmark has become another scenic spot for visitors.

The landmark of Typhoon “Khanun” is harmonious with surroundings due to its stone material, rough featured and natural trait. The sculpture is inspired by the myth of Wind God in Chinese tale and the bag of wind represents the image of typhoon and the wish of intaking typhoon and reducing the disaster. On the back of the sculpture is the path chart of the Typhoon “Khnanun” and main introduction of typhoon. Thus people can get the knowledge about typhoon as well as enjoy art works.



象山爵溪沿海公园台风地标

Typhoon Landmark in
Juexi Seaside park Xiangshan



宁海一市台风地标

Typhoon Landmark in Yishi Ninghai



苍南金乡“森拉克”台风纪念碑

The Monument of Typhoon "Sinlaku"
in Jinxiang Cangnan

温岭石塘避风大坝台风地标

Typhoon Landmark for Shelter Dam in Shi Tang Wenling

温岭台风地标建在石塘镇避风大坝上。是新千年新世纪第一缕曙光的首照之地。建国以来，共有6次台风在这里登陆。

台风地标采用八角亭造型，寓意庇佑一方百姓，防御灾害，保一方平安。在亭内刻有石碑“台风登陆地”字样，亭柱外侧镌刻对联两幅：“亭涵瑞气雨化甘霖风变顺，坝立平波天开惠路海呈祥”、“迎曙色人歌渔港千帆竞发，挽狂澜石立东南百业荣昌”，立柱内侧镌录近年来台风登陆温岭的时间及编号。

Wenling typhoon landmark is built on Shelter Dam in Shitang town which witnessed the first sunshine of the millennium and experienced 6 typhoon landings since 1949.

The typhoon landmark is an octagonal pavilion, implying a kind of providence to protect people here from catastrophe and keep this place in safe. In the pavilion, there is a stone tablet engraved “Typhoon Landing place”, two antithetical couplets outside of pillars and inside, the time and number of every typhoon landfall in Wenling.



浙江登陆台风一览表

List of Landing Typhoon on Zhejiang Province
(1949~2010)

台风编号 Serial number	登陆时气压 Landing air pressure (百帕/hPa)	登陆时风力 Landing wind magnitude (级)	登陆时强度 Landing Intensity	死亡人数 Death toll	直接经济损失 Direct financial loss (亿元/100 million in RMB)	影响排序 Influence Ranking
4906	968	15	强台风/STY	200	-	8
5122	1000	8	热带风暴/TS	-	-	36
5207	988	7	热带低压/TD	457	1.269	11
5310	945	16	超强台风/SuperTY	126	0.5766	24
5612	923	17	超强台风/SuperTY	4925	3.62	1
5901	980	12	台风/TY	25	0.2538	18
6104	990	7	热带低压/TD	7	0.3831	26
6126	945	13	台风/TY	19	4.79	7
7207	990	11	强热带风暴/STS	0	-	27
7209	955	14	强台风/STY	32	-	19
7410	995	10	强热带风暴/STS	-	-	40
7413	974	12	台风/TY	136	6.13	12
7504	970	13	台风/TY	179	4.07	16
7805	992	12	台风/TY	-	-	30
7910	967	10	强热带风暴/STS	51	4.25	21
8108	996	8	热带风暴/TS	0	-	31
8403	988	10	强热带风暴/STS	11	-	38
8506	965	13	台风/TY	213	5.33	13
8707	970	12	台风/TY	116	8.25	22
8807	970	12	台风/TY	162	13.5	14
8909	975	13	台风/TY	132	13	25
8923	980	11	强热带风暴/STS	184	1	23
9015	970	12	台风/TY	-	27	6
9219	975	11	强热带风暴/STS	53	22	17
9417	955	14	强台风/STY	1126	117.6	2
9507	980	11	强热带风暴/STS	2	0.58	34
9711	960	13	台风/TY	238	198	3
9806	985	10	强热带风暴/STS	3	7.1	29
0004 启德/Kai-tak	980	11	强热带风暴/STS	4	-	33
0008 杰拉华/Jelawat	975	12	台风/TY	-	5	37
0216 森拉克/Sinlaku	960	13	台风/TY	22	25.95	28
0311 环高/Vamco	990	9	热带风暴/TS	0	1.3456	39
0407 蒲公英/Mindule	985	10	强热带风暴/STS	2	1	32
0414 云娜/Rananim	950	14	强台风/STY	164	181.28	4
0421 海马/Haima	966	8	热带风暴/TS	0	3.5	35
0509 麦莎/Matsa	950	14	强台风/STY	5	65.6	9
0515 卡努/Khanun	945	15	强台风/STY	14	79.5	10
0608 桑美/Saomai	920	17	超强台风/SuperTY	193	127.37	5
0713 韦帕/Vipa	950	14	强台风/STY	5	56.2	20
0716 罗莎/Krosa	975	12	台风/TY	0	86	15